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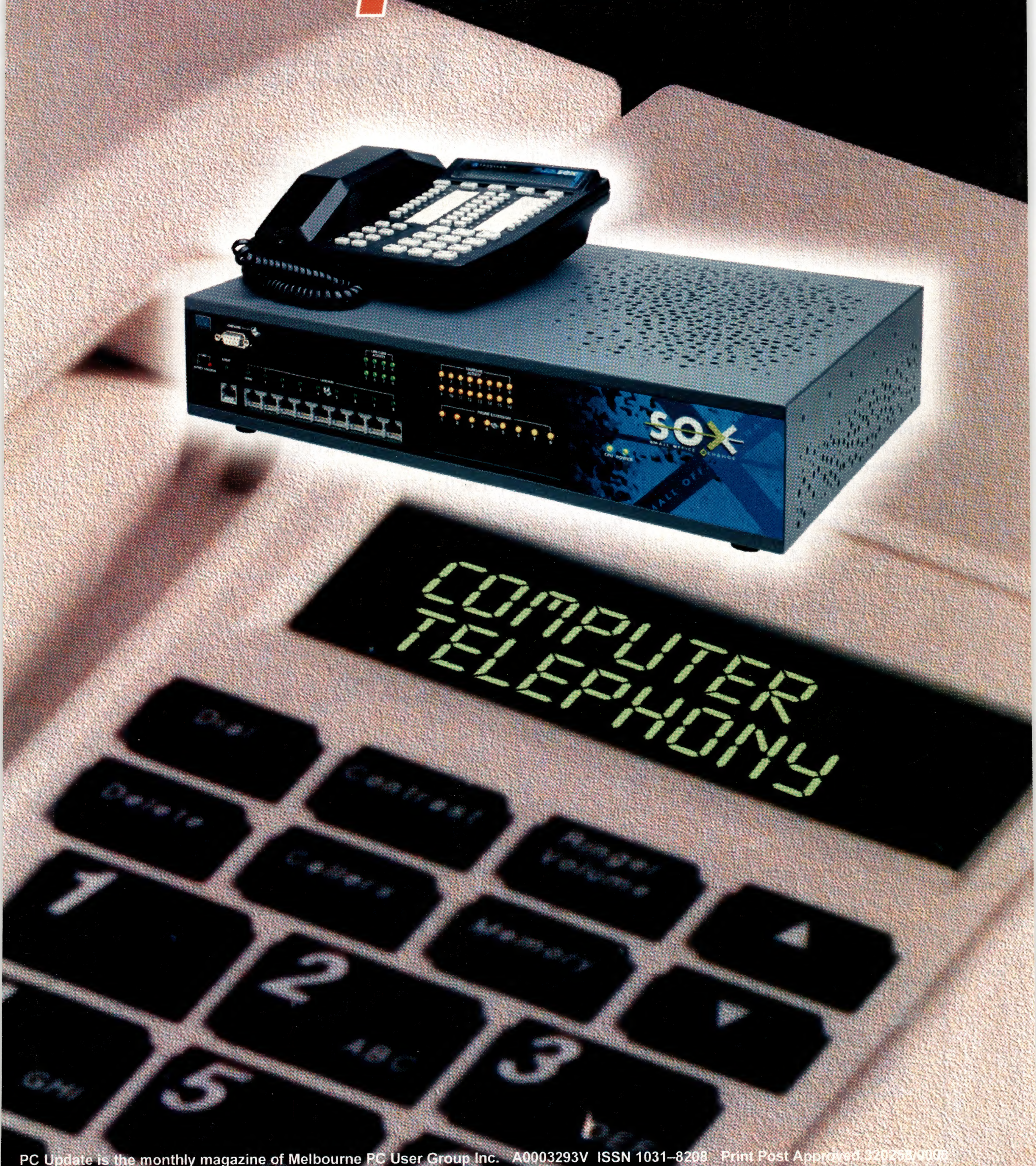

COMPUTER TELEPHONY

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PC Update

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Features

Computer Telephony — An Overview, *Greg Head* 6

Analogue and Digital, *Major Keary* 8

Customer Relations Management
An Interview with ATUG, *Gary Taig* 9

New Standards for Web Publishing, *Major Keary* 13

The Advent of Computer Telephony, *Senator Richard Alston* 24

Crackling, Humming and Phantom Calls
An experience with line noise, *Chris Prestwich* 30

Windows Flash! Report on Internet Security, *Bob Mayston* 42

Voice-Over-Net The Real Thing, *Major Keary* 43

Rubik's Cube — Part 4 Solution Continues, *Ken Holmes* 56

Reviews

Tennyson SOX: CTI in Just One Box, *Ash Nallawalla* 17

For The Bookshelf. Internet Telephone, *Major Keary* 28

Microsoft Combat Flight Simulator
Taking that Gift Horse for a Canter, *Graham Lawrence* 31

Media Studio Pro — The Evolution Continues, *Lawrie Weston* 35

Norton Internet Security 2000, *Bernadette Houghton* 39

For the Bookshelf. The Australian Internet Book, *Major Keary* 58

For the Bookshelf. Linux, *Major Keary* 61

Group Business

Acknowledgments 62
Advertisers Index 63
Dial Help Rules 62
Editorial, *Ash Nallawalla* 5
Group News and Notices 16
Internet Newsletter No 9, *George Skarbek* 26
Members' Free Ads 62
Membership Application and Renewal Form 33
Monthly Meeting Details 63
PC (President's Comments), *George Skarbek* 4
PC Update Themes and Deadlines for 2000 62
Random Access, *John Swale* 60
SIG Meeting Reports 44
Shareware Order Form 34
Shareware/Freeware Library Update, *Glenn Webster* 53
Special Interest Group Meetings, *Dave Botherway* 14
Training Order Form 33
Training Schedule — May and June 2000, *Ian Rankin* 49
Why You Should Join Melbourne PC User Group 32

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E-mail your articles, reports, reviews, and free ads to pcupdate@melbpc.org.au as file attachments. They can be Word files, plain, unformatted (ASCII) text files or plain unformatted (ASCII) text files bundled in a ZIP file with accompanying graphics. Do not pack them inside self-extracting EXE files. Submissions can also be sent by post on a virus-free diskette, which will not be returned, to the Group's PO Box.

Editing

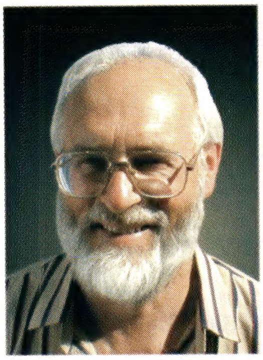
All articles are edited for style, spelling, grammar and length. Articles that may not be edited or that do not meet our standards, will be rejected.

Graphics

Supply graphics in original format in Corel or PageMaker files, or as TIFF, PCX, JPEG, EPS or WMF images. Screen shots should be RGB, as captured, ie. with resolution and colour unaltered. Save as TIFF, JPEG or PCX. Do not supply GIF files.

Rejections

Contact the editor if your submission is not published within four issues. Self-extracting files or virus infections are rejected without notification. Other rejections are advised by phone or in writing.



PC (President's Comments)

George Skarbek
President

AGM Date

In order to comply with the law pertaining to the Incorporated Associations that state that the AGM must be within five months of the close of the financial year, this year's AGM will be held on Wednesday 1 November at 6.30 pm at the Pharmacy College, 381 Royal Parade, Parkville.

New Committee Members

Both Morris Tobias and Ash Nallawalla have resigned from the committee as they are spending too much time away from Melbourne. The committee has appointed two candidates to fill these vacancies. The new members are Stan Johnstone who most members will know. Stan was president for four years (a club record) and has been assisting the Internet team for many years. The other member is Margaret Brown. Margaret has been with the East SIG organisers for several years and has the interests of all Melb PC members at heart.

Free e-mail Proposal

As electronic communication is becoming more widely used, in the last month several users have asked me if it is possible to introduce a low cost, e-mail only service. The committee considered this proposal last year and as the manager of our Internet service I produced a report for the committee that stated that this is not a viable option. Since then, Telstra have significantly improved their free e-mail service making it even less viable for us to offer a cheap or free e-mail service. My report is reproduced below in a slightly shortened form.

Summary

Although it is technically feasible to offer free e-mail for all, it would require an increase of the membership fees by about $7 plus GST. In addition the issue of support for the estimated 2,000 or more existing members who might take up this offer has not been resolved. Our existing staff cannot cope with such an increase in workload. Paid staff is an alternative but this would further increase the cost.

My recommendation is that this offer is not economically viable and we should not proceed with this proposal.

Details of the Proposal — Additional Lines

A minimum of 30 lines will be required if the maximum time per day is restricted to 30 minutes. This represents a capital cost of $20,000 and an ongoing phone rental cost of $8,000 pa. However the modem ratio is 2000/30 or 66:1 which is much higher than our exiting ratio of 17:1 and I feel that the service will be unacceptable and more lines will be required, increasing the costs.

Additional bandwidth will be used and even if we limit the mailbox to 2 MB rather than the 8 MB the fee-paying members have, our costs may increase. This cost has not been factored in.

Support

We cannot distribute our existing setup disk as it will change the existing e-mail and browser setting to Melb PC. As I expect that the majority have a work related or other ISP this will cause huge problems. Either a new setup disk must be developed or other means found to support the new users. The general feeling is that most will not be computer literate in the communication settings area and will require considerable help.

Our existing help cannot cope with such a vast increase in adding new members, let alone their help calls. The Internet team has not been able to resolve this issue.

Costs

Assuming the minimum capital cost of $20,000, this will represent about $2 per member plus the annual phone costs of $8,000 or almost $1 per member. It is possible that about 10% of the full Internet members may decide to switch to the free mail and news service and this will result in a loss of $70,000 in the existing revenue. Even a 5% loss means $35,000.

Taking what I believe is a more realistic scenario, the salient points are:

- *45 modems. Capital cost of $25,000 and annual costs of nearly $12,000 for phone lines.*
- *Probable loss of existing Internet income of $35,000 (5% of members)*
- *Additional disk and increase in processing must be factored in as otherwise the existing service may deteriorate. Cost of disk, memory and bandwidth could amount to $5,000.*

Therefore the additional costs may be $25k + 12 + 35 + 5 or $77,000 or about $7 per member. This may result in a drop in membership, even if free e-mail is added. However, the support issue is still unresolved.

Although the e-mail only proposal is not viable, the committee and the Internet team are constantly evaluating proposals to improve the service to our members. One such improvement is to give "Bonus" minutes during the non-peak periods. This is in the final stages of testing and will be fully explained next month. ❑

George

Editorial

Ash Nallawalla
Editor

It is a delight to present another thematic issue that contains many topical articles — more so because Computer Telephony is a very nteresting topic to me. I spent about 8 months in that industry until last December, when I left Tennyson Technologies to join my current US mployer.

Tennyson is a 100% Aussie company hat has had a few successes over the ears. Its ISDN terminal adaptors (TAs) were to be found in every post office in he country, and later models did well oo. Unfortunately, ISDN did not take off in Australia as well as it has in Europe, and by the time we decided to dopt the Euro-ISDN (ETSI) standard, here were faster and cheaper lternatives available.

To some extent, the so-called 56 kbit/s modems ate into some of the domestic SDN market. Tennyson took the correct decision to diversify and designed an award-winning product called Small Office Xchange (SOX), which I have reviewed at page 17.

I could not review SOX while I was connected with the company, just as I could not review Hayes modems when I worked for them. As I no longer have any vested interest in Tennyson, I can freely mention this great Aussie product.

Many of you have had a taste of computer telephony through products such as Symantec WinFax Pro; more so if you had a voice modem that could be used as an expensive answering machine. You would use a word processor to compose the fax, then send it by fax modem. The fax machine was still required to fax printed documents or for incoming faxes.

Some people have used Internet Protocol (IP) telephony, typically the kind that uses your standard Internet connection, a full-duplex sound card and a headset with microphone. You can buy specialised products or use the free Microsoft NetMeeting to try this means of communications. Often, the results are disappointing. At the cheaper end of this scale the other party will need to use the same software and at the dearer end the software will enable you to call a standard telephone at the other end. Some companies will sell you a calling card that accesses an Internet pipe along the way, but you and the person you are calling will both use a normal telephone.

I don't believe the world is ready for Internet telephony, particularly Australia, until the hardware and high-speed bandwidth are both available to us at an affordable price. The large networking and telephony companies are selling IP telephony products but the take-up is slow. They may be fine within a high-speed local area network (LAN) while there is little network traffic, but may be problematic on a busy LAN. Protocols that prioritise voice traffic, such as RSVP, are being implemented in IP telephony and you will see more of it.

You are undoubtedly familiar with the good old answering machine. Many have used interactive voice response (IVR) (e.g. "Press 1 for Sales, 2 for Accounts, etc"). Nearly all of us have used e-mail or know about it.

Just imagine taking down some notes from a long-winded message on your answering machine and keying them into e-mail to relay to others. It makes more sense if the others could hear the original recording than reading your abbreviated notes. It is more valuable if you could add your own annotations and really impressive if you could do this from some remote airport lounge.

There is no need to queue at the fax machine if there is a long incoming fax or if others are using it. CTI enables you to send the fax from your PC and, depending on your CTI solution, one or modems will be waiting to send it as soon as possible. When your old fax machine is busy sending a fax, nobody can send you a fax until that task has finished. With a bank of CTI modems at your disposal, one modem can be sending a fax while another is receiving one.

Until the concept of Computer Telephony Integration (CTI) became reality a year or so ago, these islands of communications were unable to be bridged. ❑

Computer Telephony — An Overview

by Greg Head

What Is Computer Telephony?

At the lowest level it is computers and telephones communicating directly with each other. We must distinguish here between computers communicating digitally via an analogue/digital communications path — for instance through modems — and computers using ordinary analogue telephones as input/output devices where there are no modems involved.

A telephone is a rather primitive peripheral device. Entering numerics via the keypad is okay — but generally letters are too hard. There is no fancy touch screen, no mouse, so sending data from the telephone to the computer is generally limited to numeric input. As most telephones have no display the output capabilities are even more constrained — generally limited to voice only. This imposes great challenges on the system designers who must try to deliver a user-friendly computer telephony application via this rather primitive interface.

How Does Computer Telephony Work?

Typically a human caller wishing to access a particular service picks up a telephone and dials a predetermined number. He or she may not be aware that a computer might answer the call. Sometimes that's a drawback but in a well designed system it is seldom an issue. Dependent upon the logic programmed into the computer the caller may be presented with a request to enter data or make a choice, generally by using the digits on the telephone keypad. Alternatively they may be taken directly into a computer program, or "application" as they are generally known.

Computers manipulate digital data. On the other hand most telephones are analogue devices that can generate only sound. Something is needed to convert the analogue output from the telephone so that it can be understood by the digital computer. With computer telephony this is usually achieved by highly specialised voice processing equipment that plugs into the computer's internal Bus. This voice processing equipment does all the real time analogue to digital (A/D) and digital to analogue (D/A) conversion as the sound travels into and out of the computer. This may not seem too difficult but that equipment must also be able to recognise the DTMF tones (multi frequency dialling tones) that are used for application control and are embedded in absolutely any type of voice traffic. The DTMF tones can be going in both directions simultaneously so it does become fairly complex. Fortunately most of this happens within the hardware, out of sight of the programmers and way out of sight of the telephone user.

What Are the Most Commonly Used Computer Telephony Applications Today?

Be prepared to be surprised. By value the answer (worldwide) is inevitably 1-900 numbers — predominantly sex lines and group chat rooms. Following this is pre-paid calling cards that enable long distance carriers to connect callers in countries where they have no physical presence.

By volume of lines the answer is probably those ubiquitous voicemail and automated attendant functions now common in PABX switchboards. Telephone banking is also common and its use is growing rapidly.

There are also many applications you are probably not aware of. For example the telephone companies make great us of computer telephony in intelligent switching, fax transmission and value added services. These capabilities exist entirely within the telephone network and the average user has no reason to even know this technology is being utilised.

Most computer telephony applications are so called "in-bound" applications because they rely upon a caller initiating the connection. There are also out-bound applications (where the computer initiates the call) but they are not as numerous. One good example is telemarketing applications where the computer uses a technique known as "predictive dialling" to call a list of potential customers. It connects an agent only when someone answers the phone. This greatly improves the productivity of the agent who does not have to waste valuable time waiting for telephones to be answered.

Computer Telephony Evolution

The earliest computer telephony applications were simple. Press one for this, press two for something else and so on. Most of use have experienced the frustration of mindless implementations in the automated attendant functions of modern PABXs. However, the ability to choose options enables a caller to select information by negotiating a "menu tree" from the telephone handset. This is most useful in applications where information can be delivered by voice because the caller is not subjected to any unwanted information.

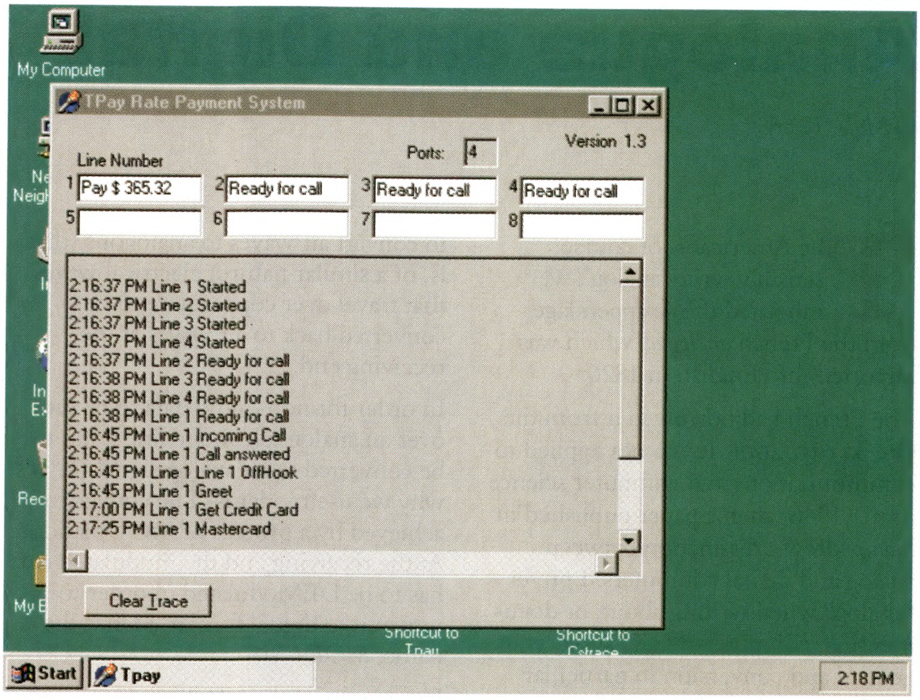
Sometimes the information required is not suitable for transmission by voice, eg. a document — so other options are eeded. Often the system will record he caller's name and address details ke an answering machine and the ocument can be sent through the post ater. However, there are other options. f the caller is using a phone/fax the pplication can immediately send a fax. nother variation is for the caller to nter a fax machine number and the pplication can schedule a fax ransmission to them. This is generally nown as "Fax On Demand" and is sed increasingly for example to obtain act sheets from lifestyle programs on hose 1-900- numbers.

Computer telephony can also be used o collect data. One application named 'Telesurvey" is for use by local councils. Rate payers can express their opinion on a number of issues without having o leave their home or office. Results re tabulated dynamically and displayed n real-time at the council. Needless to ay it is little too radical for most. Other xamples include collecting credit card data for bill payment systems and so on.

Computer telephony systems may also mbrace other technologies although hey are less commonly used. Pulse dial detection where no DTMF is available, voice recognition is sometimes used for data entry although with variable line quality it is seldom entirely satisfactory. 'Grunt Detection" used to avoid the need to enter digits and "text to speech" engines can also be employed.

Increasingly, computer telephony is being referred to or known as CTI. This implies a tighter degree of integration with conventional applications, most typically database applications. In such applications you may wish to access your own data record stored within the target computer. With the appropriate authorisations and sometimes PIN numbers, virtually any information from any database can distributed and presented easily to a telephone. In my view this is the where the great future potential of CTI lies.

Telephone banking is commonly used but it is only the forerunner of a type of application that will become commonplace when it moves beyond the Banks into the general commercial arena.



Version 1.3

Ports: 4

Line Number

1 Pay $ 365.32
2 Ready for call
3 Ready for call
4 Ready for call
5
6
7
8

```
2:16:37 PM Line 1 Started
2:16:37 PM Line 2 Started
2:16:37 PM Line 3 Started
2:16:37 PM Line 4 Started
2:16:37 PM Line 2 Ready for call
2:16:38 PM Line 3 Ready for call
2:16:38 PM Line 4 Ready for call
2:16:38 PM Line 1 Ready for call
2:16:45 PM Line 1 Incoming Call
2:16:45 PM Line 1 Call answered
2:16:45 PM Line 1 Line 1 OffHook
2:16:45 PM Line 1 Greet
2:17:00 PM Line 1 Get Credit Card
2:17:25 PM Line 1 Mastercard
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Figure 1. A typical monitoring screen on a computer running a CTI application. This view shows the progress of an incoming call during system testing.

Enquiries on your superannuation account, leave entitlements and similar personal information are obvious examples of future application areas.

There is also an increasing trend to process caller identification information in CTI systems that may yet grow exponentially. This is done routinely in sophisticated and costly call centre installations. The agent can have your complete account record on the screen at the time he or she answers your call. If you think that sounds a bit like big brother watching, imagine the time it saves you when you don't have to wait on the line for the agent to gather all that information. Soon this ability to match callers with their account information may well become a mandatory requirement of even the smallest enterprises.

Imagine for a moment you are in the car on your way home and you need to order some take-away food. Call the restaurant on your mobile; the phone (CTI enabled) answers. "Good evening Mr/Mrs Jones. Two large Mexican pizzas no anchovies as usual? What time would you like delivery? Please press one to confirm the order and delivery address." Job done automatically — all in a few seconds.

Will CTI Ever Become Integrated with Mainstream Computer Application Delivery?

This is an interesting but very much a "How long is a piece of string" type of question. It will certainly become more common. I can tell you that recently Intel bought out Dialogic — the world's largest supplier of voice processing equipment. Dialogic/Intel have also been working closely for some time with a small outfit named Microsoft. I don't know what they are up to — your guess is probably as good as mine. However, when I see Mr.Gates involved in something I know there is likely to be big money at stake.

About the author: Greg Head greghead@melbpc.org.au joined the IT industry in 1968. He is self employed and works in the fields of CTI and Internet e-commerce development. ❏

Analogue and Digital

by Major Keary

The Americans, of course, sensibly write 'analog'; we inherited the *ue* appendage from the French *analogue*, which was imported into English in 1826.

The French had borrowed it from the Greek, *ἀνάλογον*. It was not applied to communications and computer science until *c.*1946 when a paper published in *Nature* drew a distinction between analog and digital computers. I prefer "analog" when writing about, or documenting, computer-related subjects in general and conversion in particular (analog-digital, or digital-analog).

Analog signals are continuous, whereas digital signals are sequences of on-off states (or *hole/no-hole* in the case of punched tape or cards) that represent binary ones and zeros.

The most familiar example of an analog signal is the telephone. When we speak (sing, yell, yodel, or otherwise make a noise) the immediate result is the production of air waves. When those air waves arrive at an ear drum they are converted to perceived sound. In ships, voice communication between bridge and engine room was achieved by shouting down a pipe that enabled the passage of sound waves—"I telegraphed full speed astern, you stupid bathtub, not full speed ahead".

The telephone employs a microphone to convert air waves to analogous (that is, of a similar nature) electrical waves that travel over copper wire to be converted back to air waves at the receiving end.

In order for non-audio data to be sent over an analog telephone line it has to be converted to an analog signal. That's why we use modems. The conversion is achieved by a process of MODulation. At the receiving end the modulated data has to be DEModulated in order to return it to digital format. Hence the name, *MODEM*.

Large parts of the telephone system are now digital, but the bit between your handset and the exchange is still analog. A telephone conversation starts out as an analog signal, is usually converted along the way to a digital signal, and finally back to analog. In fact there may be a number of conversions, depending on the nodes (exchanges) through which the signal passes. Both digital data and analog signals may go through a number of back-and-forth conversions during their respective journeys.

The modem is not the only solution to digital-analog analog-digital conversion. There are many devices and methods, often incorporating specialised *codec* (compression/decompression) algorithms. After all, one of the reasons for *going digital* is the benefit of data compression.

There are many analog examples; thermometers with liquid in a sealed column, dial-type speedometers, odometers (even though they display digits), and clocks (even though they, too, might display digits). Digital versions of those devices are becoming commonplace, but they still acquire data from an analog source; a converter is employed to present read-outs on a digital display, or to send data to a processor.

In fact, many of these are not really digital; the appearance of the display may suggest a digital system, but the numbers are clicked over by an analog device.

Computer-controlled industrial processes rely on a number of inputs—such as temperature, pressure, position, and process rate—measured by analog devices that typically convert their respective signals to variable current. That, in turn, is converted to digital dat readable by a controlling computer, which in turn processes the informatio and sends instructions back to the machines (where it may require digital–analog conversion).

There's nothing new about that; in precomputer days it was all done with mechanical detection and control systems. ❑

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An Interview with ATUG

y Gary Taig

The Australian Telecommunications Users Group (ATUG) was born out of the Sydney Chamber of Commerce 18 years ago. It is a membership based organisation with around one thousand fee paying members. Allan Horsley is the current Managing Director who took up his post in 1995.

On Wednesday 22 March I spent an hour discussing with Mr. Horsley various issues relating to the telecommunications industry, with a slant towards Computer Telephony Integration (CTI). We also discussed the aims and objectives of ATUG and its effectiveness in bringing about change, for the better. This is a record of that discussion.

Allan Horsley
Managing Director, ATUG.

Mr. Horsley, What is ATUG's primary role nd has changed over the years?

Today ATUG's primary role is making business users aware of the capabilities and opportunities of communications and information technologies. Raising an awareness of what can be done.

We have a secondary role too. That is to bring a demand side perspective to the egislative and regulatory regimes. That has changed in the sense that we came nto existence before there was any competition and a large part of ATUG's ife historically has been to lobby for an open, competitive environment. We've spent a lot of our effort over the past 15 years in bringing about the structural change that Australia now has. ie. the competition and the light handed regulators and so on.

That's been its lifetime. Arguably we've been the only demand side organisation, the only representative of end users that has been in the game since 1988 when the change process commenced. Then of course having put that in place it was clear another major task was to alert people to the opportunities of the new world. It has also become clear since then, there is an equally large task in ensuring that the legislative and regulatory regime actually works. It's one thing to have the legislation and regulations in place but it's quite a different matter to achieve effective competition. So, there's an ongoing role for ATUG to ensure the marketplace developments meet the objectives of end users.

Take the events of the last week as an example. The Government has announced its inquiry into telecommunications services. We will put an enormous amount of effort in responding to that inquiry, to the terms of reference of that inquiry, to see that the changes that are needed **do** take place and are focussed on end users.

There is a review this year of the telecommunications parts of the Trade Practices Act. We will be there, making sure that the needs of end users are recognised. We're keeping an eye on the "industry management arrangements" which is the best way to describe it, but as well, we're out there presenting a whole range of activities like our Annual Conference (now2000) in April, our branch meetings every month and workshops that occur a few times every year helping people to understand the opportunities, how to make choice and how to manage existing services. It's a double edged task.

What do you set out to achieve with the now2000 and similar annual events?

Overall we aim to put in front of people case studies of how technology is being used successfully; to provide an environment where people can talk to their peers and learn about other people's experiences. Probably in most cases to learn what not to do because in a peer environment people tend to be fairly frank with each other about their mistakes as well as their successes. Also, we aim to create an environment where people can see what is coming and just around the corner — new technologies and so on.

This year for instance we have the head of Bell Laboratories presenting to now2000 — Bell the most eminent telecommunications research establishment in the world. That will be about horizon raising — alerting people to the types of technologies that will be here in a year or two. We have some very practical presentations on the developing role of wireless (ie. mobiles). Wireless as a substitute for a fixed service and wireless for accessing the Internet. It's about alerting people to the things their business development managers should have their eye upon, to bring into place in a year's time to make their business more competitive in the marketplace. To use communications and information services as a competitive weapon. ie. it's no longer about communications managers cutting costs, it's about them using the services to grow their business and make it more competitive. This is a change that has occurred in the last three years.

On the subject of CTI, what do you see as the most important issues?

Human factors analysis is the most crucial issue. If there is one key issue that must be addressed, it is the need to provide what the customer finds desirable.

How does one manage the needs assessment, system design, implementation and then the ongoing management of a CTI facility?

CTI is the basis today of "**Customer Relations Management**" (CRM) provided that it's done right. A continuing issue though, is the way in which the technology is used to bring about what you might describe as beneficial or sensible outcomes.

It's no longer the case of simply buying a box of tricks from somebody and installing it. In the real world all too often nobody sits down and does the process design and needs analysis properly. The end result is a less than adequate service. A non-CTI but very good example is a particular piece of equipment on the market at the moment that handles after hours calls — a sophisticated answering machine. Some call it Unified Messaging. When you ring it says, "punch in the name of the person you're calling". Imagine the task of keying in an 8-character name from your mobile phone in order to get it to work. The chances of success are about 1 in 100. Now, companies put this on the front end of their telephone service and assume it's okay for the community. Their objective is clear; they want it all sorted out so that the message simply turns up on somebody's PC. The fact that most people can't type in the name apparently doesn't matter. The customer just goes somewhere else!

Another classic example is this new electronic credit card system you see in some taxis. It's the most un-customer focussed thing you've ever seen. Firstly it does nothing until the taxi is stopped, then they swipe your card into the machine. They need to enter the starting location and destination for the journey, whether or not you want a receipt and so on and all this time you're sitting in busy traffic. Then of course this goes through the base station and sometimes you might happen to be in a black hole — communication with base is not possible. Back to the old system. With the old system you had the docket filled out before you pulled up, you wrote in the figure and jumped out.

I can only repeat that the issue which is most crucial, is for human factors analysis to play a major role in the development of CTI. If there was one message the designers need to hear, it is "consider the staff and their needs and consider the needs of the customers". Presently we have more technology than we can imagine but the business user must hear that all important message.

Doesn't this same problem exist with software development in any industry? Isn't it true more often than not, that software designers and developers need real life experience with a problem before they can solve it effectively?

Yes, they must bring in the experienced practitioners. Here's an example of someone doing it right. When the NRMA reorganised and distributed their call centre about four years ago, more than half of the design team were people who knew nothing about IT. They were front-of-house practitioners two of them were shop front staff who worked face to face with the general public. The programmers on the team had to develop a system that met the needs of these people.

From that the NRMA decided to distribute its call centre instead of having it all in Clarence Street (Sydney). This is how they approached the problem.

Firstly, they already knew the public expected to find NRMA shops in their local shopping centres — easy access to the services NRMA offered, be it travel services or insurance or whatever.

They thought about it carefully and decided, since the phone people did pretty much exactly the same as the people at the counter and needed the same general knowledge and understanding of a customer's problems, they could place a unit of the call centre at the back of the shop. This did two things; it enabled a swap of staff from the front to the back and vice vers and the secondly and perhaps a more significant benefit was that the call centre people would be working near home. They would get to work in 15 minutes instead of an hour and 15 minutes travelling to Clarence Street and what would that do? Increase productivity no doubt.

There are many other examples of companies adopting successful designs by taking both the needs of their staff and their customer into account.

Earlier you spoke of an inquiry. I notice you represented ATUG in a group of ten people in a government inquiry that took place in 1997; the inquiry was into the definition of the standard telephone service. Can you tell us about that?

Yes, there has been a series of inquiries over the years starting with the Davidson inquiry in 1982, the Broad Band inquiry in 1994 and several others. ATUG has been represented at most if not all of them — trying to present a user perspective in contrast to the positions presented by carriers.

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his time around the same will be the ase. One of the things we will be ggesting to the inquiry with regard to ervice standards is, “why is there not a equirement on a carrier to provide a elephone service within a few days, no atter where people are; even if they ffer an interim service pending the rrival of a permanent service?” The TUG view is that it should be cumbent upon a carrier, if they annot provide a fixed service mmediately that they provide (say) a obile service. which we all know can e installed in a few minutes. In rural nd remote Australia why shouldn’t here be a requirement for them to rovide either a phone operating on the ptus or AAPT Geo-stationary satellite ervices. Both of them are offering a ervice which can be installed in a day r two. Or, why couldn’t they offer the lobal Star satellite mobile service just aunched. These might not have the ata carrying capacity that the user may ltimately require, but it would be a hone service — and it would work.

hat is the main reason these things are not appening now? Is it a cost problem or does it o much deeper?

he cost is tiny compared to the hambles we have at present. It’s ecause the government hasn’t chosen o intervene on behalf of the ommunity. Notwithstanding that the overnment sets the licence conditions f the carrier and sets the Customer ervices Guarantee which defines the evel of service that should be provided. There is a new draft of that, which still ays in Australia a carrier can take 30 days to install a phone and out in the ush where there is no infrastructure or xisting wires they can take up to six months! That’s ridiculous.

Why? Is it lack of care, consideration, nderstanding?

Yes, all that. In fairness I think it’s a lack of appreciation at a government level that there is a capability within the industry today to provide prompt service, even a temporary service. Surely, it’s better to give someone an interim service that might just break even, perhaps make a small loss for a month or two to avoid all the flak being generated at present. View it this way, if a carrier gave somebody a mobile service as a temporary service while they installed a fixed phone, the user might grow to like the mobile and keep the service. Two units installed instead of one!

Could this be another example of the concept we discussed earlier, with the inexperienced programmers not understanding the real world? Is it likely that some parts of government lack the necessary knowledge and understanding?

That’s a reasonable observation. It has got to difficult levels now and when people have their backs to the wall sometimes the decisions that eventuate are not necessarily the best ones. That further highlights the need for this forthcoming inquiry to get it right. The problems have taken on substantial proportions — now we have the inquiry — and there is a big responsibility on this inquiry to arrive at some practical outcomes.

I’ve heard some incredible suggestions as to what people should submit to the inquiry. The inquiry must be told of the genuine needs of customers and only when the inquiry knows and understands those genuine needs, will it be able to recommend systems to meet those needs and expectations.

The role of the ACA is to protect and promote the interests of consumers. Is there a duplication of effort here?

Not really. The ACA and to some extent bodies like the ACCC have a continuing role. Both of them are required to have a pro-competitive view of life — but they are regulators. Yes, ATUG has a complimentary role, but perhaps we would push even harder with a focus on delivering benefit to the demand side. The regulators also have a responsibility to take account of the needs of the carriers. They have to recognise the carriers have business objectives as well as customer service objectives. The ATUG focus is more on the customer service objectives, being proactive and creating awareness. Their role is more reactive — in a sense to act when called upon to do so. The regulatory environment in Australia is one that could be described as arms length or non-interventionist. That’s the style of regulation generally in Australia.

Do you see that necessarily as a good thing?

Yes, I think it is. That was the environment developed by Fred Hilmer about 10 years ago. Hilmer did a lot of work on the management of competitive marketplaces. It’s much different here to what it is for instance in the UK and USA. They have telecommunications regulators that are very much interventionist — that’s not the style in Australia.

Do you mind if we go back to that 1997 review of the Standard Telephone Service in which you represented ATUG. I read that there was a level of disappointment in the appropriate government office when there was failure of the members to reach agreement. Are you able to tell us why there was no agreement?

This was where Professor Henry Ergas submitted a minority report that was economic rationalism in the extreme, saying that the government shouldn’t intervene in defining service standards or service capability and should let the marketplace sort it out. Well, that was a good theory but only when there is effective competition. When there is dominant provision of a service, it hardly works.

This was a debate about what should be the capability of a service provided under the Universal Service Obligation (USO) and nine of the group said: “There is a responsibility for the carrier to deliver to the customer, the basic and uninhibited capability of a digital communications network”.

It was decided years ago that the capacity of a basic digital network should be a 64 kbit data stream. That was needed to produce voice quality equal to the older analogue bandwidth of 300-3400 Hz. The STS review group arrived at the decision that all customers should have that 64 kbit delivered at the premises, so that not only could they have a voice conversation but they could also send data. Users could communicate using their PCs without the need for analogue conversion. That was the line taken by nine members of the panel.

In contrast Professor Ergas said there was no demonstrated need for all that and that it shouldn’t be forced to happen. In the end the majority report of the nine people was regarded as a bit too interventionist and the minority report by Ergas took precedence. It suited the non-interventionist approach of the government. Of course the reality is that two or three years has gone by and nothing has happened. We can claim now that the approach of waiting for the marketplace to make it happen, has failed, where there has not been effective competition.

To build on that even further, much work has been going on over the past year to consider how we can bring competition into the provision of services provided under the USO. Much of that work has been about finding a means by which the government can identify (say) three providers of service who have robust, reliable technology and reasonable prices. Then allow the customer, particularly the country customer to choose a provider just as you and I can choose in the city. A year of work has been done on that concept and we think the government has accepted the idea. But, it is also one of the terms of reference of the forthcoming inquiry and we have been worried and concerned that this might delay implementation. It is ready to move ahead now and shouldn't wait until September when the report is due.

Short duration calls. There has been much discussion and gnashing of teeth over calls that were supposedly not made but were charged on phone accounts. Has ATUG been involved in any of this?

We spent some with Telstra working through where this problem lay. It is fair to say that by and large the problem lies within the customer equipment and not within the Telstra network. There is a variety of equipment out there that can answer a call, even though the caller might not realise the call is answered. Some equipment used by ISPs is designed to let the call in, even though the ISP doesn't have a port available to enable it to service the task. If the ISP has some equipment failures or is overloaded with traffic, the number of incoming lines to that facility should be reduced so that the number of incoming lines is not greater than the number of ports available to provide service. It is when the incoming call is answered by that ISP in a telephony sense, but the call cannot be handled by the computer, that creates the circumstances you mention. If the caller has automatic redial operating, their system will just keep on calling — every call connected but none of them ever providing the desired result.

The warnings are: ISPs should ensure they can handle all of the call load from their customers and the user should not activate automatic redial.

A similar circumstance occurs with voice. There is equipment which answers an incoming call and returns an artificial ring tone for three or four rings, giving a fax the chance to answer before it even starts to ring the phone in the premises. Now that's all very well if the caller is sending a fax but if you are not home and I call you from interstate, I will wait and wait, allowing the phone to ring perhaps many times before concluding you are not home and I give up. All that time I had no idea the call was indeed answered and I've spent my time, and my sixty cents, just listening to a substituted ring tone.

Does ATUG get involved in education campaigns about these things?

Yes, we do. When we find something like that we write it up in our monthly magazine. If it's bad we may highlight the issue in *The Australian* every Tuesday. We can use that to ring alarm bells. If we discover something really bad we can always issue a press release and talk to some journalists and raise the alarm that way. In some instances we've lobbied the ACA to put out a warning notice — which they've done on a couple of occasions.

ADSL, the technology that will cut costs and supposedly put some ISPs out of business. What can you tell us about it?

Why do you say that? I would have thought it was the means by which ISPs are going to be able to deliver their full capability to the customers' premises, rather than have it throttled off by low capacity or slow speed connections.

I understood it was something that enabled one to receive an Internet feed directly throug the phone line, without the need for a moden I don't recall where I got the idea of it being threat to ISPs.

ADSL is a service technology which enables you, the customer to send and receive high capacity data signals over the telephone line. The person who wants to provide you with the ADSL service will have established an interfac in the exchange building and then run pair of wires from where your line terminates in the exchange, over to the network interface box and connect you to their facility. That facility will contai the ADSL modems which can send anc receive broad band signals to/from you location or your premises and to/from the broad band network. That ISP will be able to provide you with a high capacity feed through your ordinary copper wire pair. As I see things, it will advantage the ISPs because they can connect directly to their customer.

I've taken up a good deal of your time and fo that we thank you. Before we finish is there anything special in the pipeline, any scoops that you know of, that our members might find interesting?

Well, one that is of interest is so-called IP telephony. That is best described as telephony using packet switching technologies. The advantage is that you telephony and your data for your corporation is put into one bitstream at your end and then sorted out at the other end. So, for corporate networks you will be able to share bandwidth between premises, between voice and data. Up to date that has been quite hard to do and I think you'll see that voice/data integration take off in the next year or two. One of the big issues then will be the connection of mobiles to this packet switched network.

Mr Horsley, on behalf of all Melb PC members, thank you. ❑

New Standards for Web Publishing

by Major Keary

The ubiquitous HTML may not disappear, but its use will change and diminish as new Web publishing standards are established. Users should set out to familiarise themselves with the *eXtensible Markup Language* (XML) and XHTML. An understanding of the *Standard Generalized Markup Language* (SGML) is, in my opinion, the best first step to XML.

HTML was based on SGML, invented by Charles Goldfarb it was established in 1969 and is enshrined in ISO 8879–1986. The familiar angle brackets come from SGML as does the model for HTML parsers that process files. Parsers do the work that results in what the end user sees on his or her monitor.

Because HTML has a small repertoire of tags and elements, parsers for Web browsers are easy to construct; however, similar software for SGML is very expensive because of its complexity.

Why SGML?

SGML is designed for documentation that is very large and has a long-term life. An example given in *The XML Handbook* is that of documentation for a single model of a commercial aircraft. Typically it will require some "four million unique pages ... that must be revised and republished quarterly". Take, for example, the number of models (and variants within models) produced by Boeing "and you get a feel for the scale involved". Using SGML for the base documentation enables any modifications to be self-healing, so to speak; pagination, index entries, and other adjustments are automatic. The document is entirely independent of any software used to render it, either in print or online.

A good place to start looking for SGML information on the Web is *www.oasis-open.org/cover/sgml-xml.html.*

Document Type Definition (DTD)

The DTD is essential to SGML and XML and is a component of HTML 4.0 and XHTML. It contains definitions of all the tags and elements used in a document and is read by parser software to determine the action required by each defined tag and element. Think of it as being like a style sheet—an analogy you will quickly discard once you take a serious interest in the subject.

The HTML Dilemma

The wheels are falling off. HTML was designed to control presentation—the way text appears when viewed—but not structure. Another factor is the way in which proprietary *enhancements* cause tags to be rendered in different ways on different browsers. Even though the needs of commercial users are satisfied to some degree by workarounds, what was supposed to be a simple system has become increasingly complex and an unsatisfactory solution for Web publishing.

Enter XML

The eXtensible Markup Language (XML) is a simplified subset of SGML designed specifically for Web publishing. Along the way it has picked up a number of interesting friends; there is not space here to provide a detailed list, but one should be mentioned. In conjunction with Java it offers a sound solution for ecommerce applications.

There are two essential differences between XML and HTML One is that XML is designed to provide structured documents. The other is that browser vendors can't muck around with it; control is firmly in the hands of the user who can create tags for special purposes.

XML Stumbles?

Well, actually it is the users who have chosen to stumble along, hacking their collective way through HTML. Expectations that XML would quickly establish itself have not been realised. There is a lot of development going on and many enterprise users are turning to XML. In the face of hesitation to embrace XML, W3C has realised that some kind of transition is needed.

A Stricter HTML

The solution is XHTML, which imposes penalties for poorly formed documents (they won't work). For a full exposition, go to *http://wdvl.internet.com/Authoring/Languages/XML/XHTML.* I have to acknowledge the efforts of Robin Howells—web ferret *extraordinaire*—who alerted me to the site. It is well organised and provides links to related documents and software. The presentation is not overly technical and assumes no more than familiarity with HTML.

The object of XHTML is to enable authors to write documents that can be processed by XML parsers and software, but that will retain compatibility with current HTML browsers. Most presentation markup tags and elements will be retained, but are case sensitive. Tags must be closed; open tags such as <P>, <HR>, <IMG> etc. are not allowed unless paired with a matching closing tag, as well as having to observe the case rule.

Authors will be gently pushed into developing habits consistent with well-formed documents, essential to XML. They should also become used to using and writing DTDs.

And Back to XML

Once the transition to XHTML has been mastered users should be well on the way to taking advantage of the increasing array of applications for Web publishing offered by XML.

This is the first article in a series that will explore XML and describe some of the available resources.

Special Interest Group Meetings

SIG Coordinator, Dave Botherway

SIGs are the life blood of Melbourne PC User Group. Groups of members with specific interests meet regularly to discuss and indulge their interests in a wide range of topics.

This is where Melb PC membership really pays off and you gain all the benefits. Enhance your computer knowledge, widen your circle of friends who have similar interests and occasionally, similar problems to solve.

Attending a SIG and meeting other members not only helps to enhance your knowledge and understanding of the specific topic. Often you will see presentations by visiting experts and the value of that is clear to all.

All members are most welcome. This is part of your Melb PC membership, so feel free to contact any of the conveners listed here. Ask them about future meetings; ask them about the format of their meetings and anything else you need to get started.

Dave.

Access (Database)

access-sig@melbpc.org.au
2nd Monday
6.30 – 8.30 pm
Ian Daniels
9802 0540 AH

Assembly & Other Languages

alt-sig@melbpc.org.au
http://www.melbpc.org.au/sig/alt
1st Thursday
7.00 – 10.30 pm
Melb PC SIG Room
Felix Hofmann
0408 023 423 BH
9523 5400 AH
Don McKenzie
9521 3060 BH

This is a technical programming SIG not confined to specific computer languages. Bring your algorithms, your code and your questions.

Ballarat

ball-sig@melbpc.org.au
1st Thursday
7.30 – 9.45 pm
(except school holidays)
Ballarat & Clarendon College
614 Mair St, Ballarat
VicRoads map 254 L12
Ken Smith
5332 7851 BH & AH

Ballarat is a general purpose SIG, usually we have no specific topic; it suits everyone at present to let the meeting run in a direction that is topical on the night. From time to time we have a guest speaker/presenter on something of particular interest to us at the time but free form seems the norm at present.

Bendigo

bend-sig@melbpc.org.au
http://users.netcon.net.au/joe/melbpc.html
2nd Wednesday
7.30 – 10.00 pm
Girton Grammar School
105 Mackenzie St, Bendigo
(Vine Street entrance, then follow the signs)
VicRoads map 282 K14
Alistair Shaw
alistair@primus.com.au
0417 688 705 BH & AH
Joe Henry
0408 134 404 BH & AH

The Bendigo SIG is a regional group of computer users based in Bendigo. Young, old, experienced, beginners, all are catered for. Each meeting consists of some presentation, where interesting, useful or helpful information is shared. Question and answer sessions are also a great help for those with computer related queries.

Clarion

clar-sig@melbpc.org.au
4th Wednesday
7.00 – 10.00 pm
Melb PC SIG Room
Chris Livingstone
9431 1897 BH & AH

Communications

comm-sig@melbpc.org.au
http://www.melbpc.org.au/sig/comms/
2nd Wednesday
7.00 – 9.30 pm
Melb PC SIG Room
Philip Lew
9822 2998 BH (brief calls)

The Communications SIG focusses on all aspects of computer connectivity. Topics include modem communications (BBS and Internet dialup); Client /Server software, HTML and other Internet related topics. We also cover topics on Computer Networking (LANs and WANs) and other relevant general telecommunications issues of interest to the well connected PC user.

Daytime

day-sig@melbpc.org.au
http://members.xoom.com/day_1/
2nd Thursday
10.00 am – 12 noon
Melb PC SIG Room
Don Buchanan
9509 7119 BH & AH
Graeme Minto
9440 5030 BH & AH

Daytime SIG is very popular; we have a good mix of female and male attendees and members have expressed satisfaction with the informal nature of our presentations. The SIG suits members who prefer and are available to meet during daylight hours. A wide range of topics are presented, dependant largely upon preferences expressed by the attending members. See our Web page for information.

Digital Photo

http://www.melbpc.org.au/sig/digip/
3rd Monday, 7.00 pm
Melb PC SIG Room
Thom Lyons
9525 9793 or 0417 525 171

East

east-sig@melbpc.org.au
http://www.vicnet.net.au/~mpceast
2nd Tuesday
7.30 – 10.00 pm
Blackburn English Speaking Language School
120 Eley Rd. Blackburn Sth.
Melways Ref. 61 J5
Keith Beresford
9733 5044 AH
9736 2515 BH
Margaret Brown
9874 5778

East Workshop

east-ws@melbpc.org.au
http://www.vicnet.net.au/~eastsig/workshop/
Sunday following the East SIG meeting,
10.00 am – 4.00 pm
Blackburn English Speaking Language School
120 Eley Rd. Blackburn Sth.
Melways Ref. 61 J5
Ken Gubbins
9898 5478 PH/FAX

*The **East Workshop** is hands-on, practical, interactive and runs on the principle "Show me how, and I'll do it with your assistance". We handle "how to upgrade", "software doesn't run", "slow computer", "no sound, no video" problems and more. Bring your computer along.*

*The East **Beginners Group** demonstrates how to set up and maintain a computer, how to run software, scan documents, process images, sort out error messages, etc. All procedures are repeated (slowly), until members feel confident with the new knowledge.*

Foothills (Boronia)

foothills-sig@melbpc.org.au
http://www.wasser.com.au/foothills
1st Sunday
(except January)
1.00 pm – 4.00 pm
Progress Hall (rear entrance)
134 Boronia Road
(near Dorset Road.)
Melways map 64 K9
Jim McNabb
9754 4862 BH & AH

Genealogy

genealog-sig@melbpc.org.au
http://www.vicnet.net.au/~eastsig/genealogy/
Sunday following the East SIG meeting.
12.30 pm – 3.00 pm
Blackburn English Speaking Language School
120 Eley Rd. Blackburn Sth.
Melways Ref. 61 J5
Bruno Dik
9733 4585

The Genealogy SIG is for those beginning genealogy and for those who are advanced but need more computer knowledge to move ahead. Members' trials, tribulations and expertise are openly discussed and freely shared in this self-help group.

Graphics

graph-sig@melbpc.org.au
3rd Monday
7.30 – 10.30 pm
Melb PC SIG Room
Yahya Abdal-Aziz
9562 1023 AH (brief calls)

The Graphics SIG explores issues related to computer graphics software and hardware. Members provide demonstrations each month, covering areas such as paint programs, animation, graphics programming, printing, and scanning. Visitors are invited to bring along their graphics problems.

Hardware

ardware-sig@melbpc.org.au
ttp://www.melbpc.org.au/sig/hw/
rd Wednesday
.00 – 11.00 pm
Melb PC SIG Room
elix Hofmann
408 023 423 BH
523 5400 AH
Thom Lyons
525 9793 or 0417 525 171
We deal with all levels of PC Hardware from chips to complete etworks of computers. Memebrs are nvited to bring their questions and/or heir hardware to the meeting for dvice / assistance

LUBe

ube-sig@melbpc.org.au
http://www.melbpc.org.au/sig/lube/
rd Thursday
.00 – 10.00 pm
Melb PC SIG Room
Thom Lyons
9525 9793 or 0417 525 171

MACE

(Melbourne Atari Computer Enthusiasts)
mace-sig@melbpc.org.au
http://www.melbpc.org.au/sig/mace/
2nd Sunday
10.00 am – 2.00 pm
Melb PC SIG Room
Graham Hurford
9416 1126 AH
Roger Davies
9879 1109 BH & AH
Enquiries 0500 818 448
The Atari SIG is dedicated to the the oy of Atari. The SIG is fast, furious and action packed. We welcome all owners and former owners (we know you are out there) to visit us and join in the fun; it's a soul thing.

Music

music-sig@melbpc.org.au
2nd Thursday
7.30 – 9.30 pm
Melb PC SIG Room
Yahya Abdal-Aziz
9562 1023 AH *(brief call please)*
Eric Best
5781 1224 AH

New Users, East

newe-sig@melbpc.org.au
2nd Tuesday
7.30 – 10.00 pm
(except January)
St Mark's Anglican Church
Cnr Canterbury & Burke Rds,
Camberwell
Melway map 45 J10
Mark Trickett
9480 6695 BH & AH
New Users, East caters for the needs of prospective and new computer users, new members having machine operating or system problems, and those new members wishing to increase their understanding of their equipment.

Northern Suburbs

north-sig@melbpc.org.au
4th Wednesday
7.00 pm – 10.00 pm
Level 1,
86 South Crescent
Northcote.
Kristian Speers
9482 7141 or 0413 627 578
Mark Trickett
9480 6695 BH & AH

OS/2

os2-sig@melbpc.org.au
4th Tuesday *(except December)*
6.30 pm – 9.00 pm
Melb PC SIG Room
John Angelico
9544 8792 BH & AH
The OS/2 SIG offers technical and user-level support for all OS/2 users, covering all from 1.x to Warp Server for e-Business, plus native application software. Meetings feature news, software reviews, tips and tricks and the latest updates. Technical support days focus on installation and support for OS/2 applications and hardware assistance.

Programming

prog-sig@melbpc.org.au
2nd Tuesday,
7.30 – 10.00 pm
Melb PC SIG Room
Ross Hall
5428 7497 AH
9699 4000 BH
Andrew Callaway
9619 4067 BH

Quicken

quicken-sig@melbpc.org.au
http://viv-martin.hypermart.net/quicken.html
4th Thursday
7.00 - 9.30 pm
Melb PC SIG Room
Viv Martin
9583 5372 BH & AH

Retired & Interested Persons

rip-sig@melbpc.org.au
http://www.melbpc.org.au/sig/rip/
10.00 am – 12 noon
4th (not last) Friday
Lutheran Church,
25 Cypress Ave,
Glen Waverley
Melway map 62 A9
Ken Thomas 9884 5309 AH
Noel Peters

Teen Game Development

youth-sig@melbpc.org.au
3rd Saturday
2.00 – 5.00 pm
Melb PC SIG Room
Tobias Cohen
The Teen Game Development SIG focuses on game development for Under 18s with Games Factory, Klick'n'Play, MZX, Delphi, VB, Qbasic, GWBASIC, BASICA, Assembly, C, C++, Turbo C++, Visual C++, C++ Builder and more. Dedicated to teenagers interested in learning or furthering their skills in computer game development.

Video Editing (General)

video-sig@melbpc.org.au
http://www.vicnet.net.au/~vidsig/
4th Monday
7.00 – 9.30 pm
45 Talbot Ave, Balwyn
Melway map 46 E8
Albert Vanzet
9439 1768 BH & AH

Video Editing (Non-linear)

videonl-sig@melbpc.org.au
1st Tuesday (incl Nov)
7.30 – 10.00 pm
Melb PC SIG room
Lawrie Weston
9742 3738
Two computer video editing groups cater or the needs of Melb PC members. Their aim is to assist those who use the various hardware and software options to operate these systems and to convert their source recordings into pleasant and entertaining video productions. The "General" SIG uses both "linear" and "non-linear" systems and discusses topics such as "the art of video and video editing" The "Non-Linear" SIG concentrates only on that form of video editing and the various effects it offers. Both groups encourage members to bring along samples of their work for discussion. Visitors are always welcome.

Warragul

warr-sig@melbpc.org.au
1st Friday
7.30 – 10.00 pm
Warragul Education Centre
Smith St, Warragul
VicRoads map 337 Q8
Doreen Gillett *(Assistant Sec.)*
5622 2865 AH

WASINT (Web and Software Investment Tools)

WASINT-Sig@melbpc.org.au
http://www.melbpc.org.au/sig/WASINT/
3rd Thursday
7.00 pm – 9.30 pm
Melb PC Top Floor SIG Room
Richard Solly
9626 7640 AH
Become more confident in the use of web and software tools as part of your financial life. Join others, both at the monthly meeting and through the online web board to share your favourite sites and information sources in the exploding field of online financial information.

Web Development

webdev-sig@melbpc.org.au
http://www.melbpc.org.au/sig/webdev/
4th Monday,
7.00 – 10.30 pm
Melb PC SIG Room
Thom Lyons
9525 9793 or 0417 525 171

Web Development Workshop

webdev-sig@melbpc.org.au
2nd Saturday, 10.30 am
Melb PC SIG Room
Thom Lyons
9525 9793 or 0417 525 171
(members may bring their own systems)

Western Suburbs

west-sig@melbpc.org.au
http://www.angelfire.com/or/westsig
4th Tuesday
7.00 – 9.00 pm
Our Lady's Tennis Club,
Sunshine. (near the corner
of Cornwall & Devonshire)
Melway map 26 K12
Tony Calenti 9370 8193 AH

Windows

win-sig@melbpc.org.au
1st Monday
7.00 – 9.30 pm
Melb PC SIG Room
Lynn Pollock
9598 3186 AH
9533 5002 BH

Windows 2000

http://www.melbpc.org.au/sig/nt/
3rd Tuesday
7.00 pm
Melb PC SIG Room
John Bade ❑

Changes and updates to Dave Botherway — daveb@melbpc.org.au

Group News and Notices

Melb PC Orientation Days

Orientation Days have started again. This is for both **new** and **established** members to come and see Melb PC facilities and find out more about the benefits of Melb PC membership. The next one is planned for 27 May 2000. These sessions are held at the Melb PC office at 27 Dorcas Street, South Melbourne, starting at 10.00 am and running for about two hours.

Members are welcome to bring family or friends **but numbers are limited and bookings are essential.** Phone the administration office on (03) 9699 6222 ❑

Free Daytime Internet Sessions for the Retired and Unemployed

This series of one-day Internet sessions is continuing to assist subscribers and prospective subscribers in using the Melb PC Internet service. There is no charge for these sessions; they are strictly for retired and/or unemployed members.

Sessions are being held on a weekday only. They start at 10.00 am and run to 3.00 pm for small groups of 12 to 15 in a demonstration and seminar format.

Location: 2nd Floor SIG Room at 27 Dorcas Street, South Melbourne. These free sessions are designed to meet the requirements of both beginners and intermediate users. Sessions will explain what goes on behind the scenes, connecting, browsing, mail and news, as well as familiarisation, netiquette and carrying out simple tests.

Members who are interested should contact **Stan Johnstone**:
by letter (c/o the office)
PO Box 283,
South Melbourne, 3205,
by fax to (03) 9699 6499, or
e-mail to stanj@melbpc.org.au
An attempt will be made to match available dates and experience. Attendees will be contacted individually with available session dates. ❑

Possible New SIGs

Recent requests for new SIGs have included:

- Microsoft SQL Database
- PalmTop Computing
- MYOB Accounting Software
- A Daytime Group that would meet in the Essendon area. (We already have a member willing to be the SIG leader).

Anyone interested in these possible groups should either send an e-mail to sig-cordinator@melbpc.org.au or leave a phone message via the office. ❑

MYOB Trainer Wanted

Training is expanding its range of courses and we're looking for someone suitably qualified to run new courses on MYOB. If you have the experience and you can teach, please contact our Training Coordinator, **Ian Rankin.**
e-mail irankin@melbpc.org.au
or phone the office on 9699 6222 ❑

Friday Night Seminars

Following the success of Seminars held over the past two years, Melb PC Training is holding a series of Seminars on Friday nights.

Bookings are essential. Contact the office to ensure a seat.
Phone: 9699 9222 9.00 am – 5.00 pm

There are two Seminars remaining:

Friday 26 May
101 Tips & Tricks for Windows 95 and Windows 98 Users.
6.30 pm to 9.30 pm
Cost $20.00

Explanation of the tricks, traps and other problems encountered when using the Windows operating systems and how to keep Windows running smoothly There will be the opportunity to have your individual questions answered during the seminar.

Friday 16 June
How to Fault Find, Upgrade and Replace Hardware Inside Your PC
6.30 pm to 9.30 pm
Cost $20.00

Practical demonstration of some hardware upgrades, fault finding, Driver upgrades, virus protection and strategies for preventing future problems.

An outline will be given on files you can and cannot delete from your system.

There will be the opportunity to have your individual questions answered during the seminar. ❑

New Melb PC Brochure

Some time ago committee member Ray Beatty took on the job of producing a new Melb PC brochure. Word is around that the soon to be delivered brochure is fantastic. It includes photography by Melb PC member Peter Bailey who just happens to be one of the country's top professional photographers. Watch for more news! ❑

Tennyson SOX: CTI in Just One Box

Ash Nallawalla

Business success requires a first-class voice and data communications system. You want a fully featured telephone system with all the facilities that your customers expect. And then there is the computer network, not forgetting the Internet. You almost need a full-time team of telephony and computer engineers just to put it all together and keep it working.

The Old Way

The requirements of modern day businesses are complex compared to, say, four to eight years ago. Who would have envisioned that data/telephony integration and the Internet were going to be an integral part of the present day office? In the past, telecommunications and networking connectivity requirements were added on an "as needed" basis, without too much thought to "What if I expand beyond 10 users?" or "What if I want to integrate my data and telephony requirements?"

Increasingly, large businesses are turning to the Internet as a means of improving information flow, productivity and for their commercial processes. But for most small-to-medium offices, Internet connectivity can be a major headache and have a substantial impact on the company budget.

Discrete PBXs, Routers and LAN Hubs have until recently provided the only option, albeit a loosely coupled one. Users have, however, quickly discovered the limitations of such a solution when looking for support to resolve say, an installation problem, with suppliers consistently pointing the finger at someone other than themselves, while both cost and frustration escalate.

A second and more complete Computer Telephony Integration (CTI) alternative has become available in recent times — the software based solution that becomes less attractive when viewed beyond two years. Such solutions usually require a dedicated PC and a telephony card in it. Given that operating systems change every 18 months or so, there are often compelling arguments for you to keep that PC up to date. For example, this PC may be connected to the LAN and may need to remain compatible with it. This adds to the cost and, in the worst case, a major operating system upgrade could require upgrading the PC or telephony hardware.

Say, you are starting a company or moving premises — where do you begin? Who do you contact? Who are the experts? What services do you need now and in the future?

The first step for most businesses is to get the bare minimum telephone functionality as this is crucial to business operations. You ring the phone company and get a couple of phones installed. Then you buy a fax machine. However, after two months your business begins to grow and you have employed more people, and you need something else to satisfy the demands of both your users and your customers.

Perhaps you contact a systems integrator (SI) for telephony, or go it alone and attempt to source your own solution for the corporate phone system. You would invariably be offered a variety of key system solutions or a PBX without much thought given to future requirements. You may well decide to buy the cheapest option.

You would probably have one or two stand-alone PCs to run spreadsheets or word processing applications. Your users will soon find this type of non-networked environment very limiting and time-intensive. They will complain that they cannot easily transfer data from one PC to another without using a floppy disk. Sending a fax means that you compose it on your word processor, print it, then walk to the fax machine and send it. Incoming faxes sit in the fax machine, waiting for someone to notice them and bring them to the recipients.

The answering machine has probably come from the founder's home and nobody seems to know how to use it.

Now your data requirements are growing but you are unable to grow with them. You need something that will enable your staff to perform basic data transfers easily and efficiently and allow this data to be easily and transparently accessible by all users.

You contact the key system PBX vendor and discover that your key system/PBX is unable to perform the basic networking tasks that you require. The only advice offered is *"Go and ask a data guy, he should be able to help you."* You take the advice with reservation as you still remember how much you spent on your telephony key system.

The computer company will probably offer you a LAN hub, to enable you to network your PCs. Buying the model that may allow you to grow in the future is just too expensive for what you need right now, and you are unlikely to expand further, so you take the cheap alternative.

At this point you haven't thought about the interoperability of devices that you have had installed on your new network and the phone system.

What's more, you are now most likely dealing with two vendors with two totally different systems for your office environment. You are now met with the age old run-around, *"It's not our PC; your PBX is at fault!"* You overcome this hurdle, but can they remotely analyse and configure the device that they installed? Probably not! They come on-site and charge the proverbial arm and leg. Sounds familiar?

Let's take stock of what we have so far:

- A key system/PBX from one vendor or Systems Integrator (SI).
- A LAN hub from another vendor.
- A stand-alone fax machine.

We haven't even thought about the Internet yet.

So, now you have the basic data and phone aspects of your company installed and your users are relatively happy. But some customers are complaining about not being able to get through, because your phone extensions are always engaged. The fancy key system you purchased requires weird key sequences that most of your users can't remember — all that functionality goes to waste.

The staff can send e-mail to each other internally, but accessing and sending e-mail to the outside world is what they really want — "everyone else has it" — why don't they? Some of the staff might ask, "When I work from home how can I access information on the LAN?" Or, "Wouldn't it be nice if somehow the LAN could integrate the telephony and data, and allow me to send faxes from the desktop, or control the phone functions more easily? And how exactly do you get Internet e-mail to work?"

Your data systems company will probably suggest a router to add to your existing LAN. Or they may suggest you try another vendor to supply this piece of equipment.

So you get a router that will allow you to connect your LAN to the Internet. You will also require a mail server, most likely NT Exchange Server 5.5 to enable you to send e-mail to and from the Internet. This will also allow your LAN users to browse the Internet and give them many other useful tools for their general day-to-day tasks.

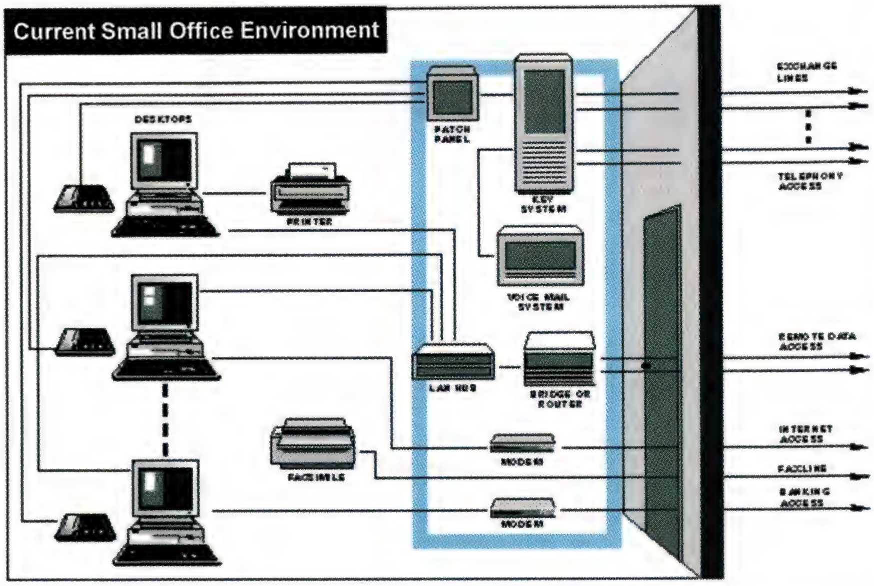


Figure 1. The current small office environmen

But your home-bound workers want to access your office or you may have a sales force that needs such remote connectivity. Unfortunately, the cheap single-port router that they offer you will not perform this task and you need a more expensive device to allow your remote users to dial in and access your LAN.

Your advisers may alternatively suggest that you purchase another PC, install NT Server and RAS or (RRAS) to act as your "Dial in Server" specifically. Both solutions will work but now you have three or four devices performing your network needs.

Let's update the list of "Black boxes":

- A LAN hub for PC-to-PC connectivity
- A PBX/key system
- A fax machine
- A router and a dedicated PC for dial-in or a relatively expensive remote access/router.

So, you have added these devices to your network and they are performing some of the tasks that your users requested. E-mail and Internet access is now available from every LAN PC. Your telecommuters and your sales force can access the LAN from a remote location.

Unfortunately, customers are getting engaged signals when the desired staff member is on the phone, instead of being diverted to someone who can tak a message.

When something goes wrong or when you need to add a new extension for a new employee, it involves asking the phone company to come and make that change. When you have a problem with the access to the Internet, say, the modems aren't able to connect to the ISP. Who do you contact: The local Telco? The PBX reseller? The modem reseller? The LAN/WAN SI that installed the router? Of course, they will all try to pass the buck.

In the meantime your users and or customers are screaming at you because the problem may not be fixed in the near or distant future. If only you had one point of contact and one vendor who could take all the worries out of your telecommunications setup.

The New Way

May I introduce you to SOX (Small Office Xchange), the Australian-designed and built product that gives you a fully featured telephone system integrated with the computer and data services that the modern office needs — in just one box.

Take the Master Unit out of the box and power it up. The telephone lines plug into the rear. The telephone handsets simply plug into the front and you immediately have a functional phone system, which you can customise later.

Plug the computer network leads into he front panel and your local area network is up and running. Relax, get coffee. Depending on the options purchased, you can next install and onfigure the automated attendant, -mail, fax and voice mail, and access o external data systems such as the nternet or your wide area network. You can personalise the extensions to match he names of employees and give them varying levels of privileges.

SOX adds the power of personal computer connectivity to key phone systems. SOX adds CTI functionality, unified messaging and an intelligent auto attendant. The SOX virtual phone has an intuitive, mouse-driven graphical user interface. The phone system in SOX works independently of a personal computer or network server. SOX is modular and scalable. SOX integrates voice, data, the Internet, e-mail and messaging.

Options

A SOX solution is usually built from a selection of several options.

The hardware options reside in the Master Unit, and the software options reside partly in the Master Unit and partly on a Windows Exchange Server PC. Software keys are used to unlock optional features.

The first decision you will make is the type of trunk you will need to connect to the telephone company. You will need either one or two analogue trunk cards or one or two ISDN Basic Rate Interface cards, or a combination of them. Each type of card supports eight lines. A 30-line Primary Rate card is also available; it mounts in a feature card slot, thus enabling it to coexist with the previously mentioned trunk cards; therefore, the Master Unit supports a maximum of 46 lines.

The SOX Master Unit contains four internal slots for any combination of optional feature cards. Two are available now: a client-end modem, which dials out to another site such as an ISP at (a nominal) 56 kbit/s; and a central site modem, which presents (a nominal) 56 kbit/s to external callers when paired with an ISDN trunk. These modems also have fax capability and support the optional SOX fax software.

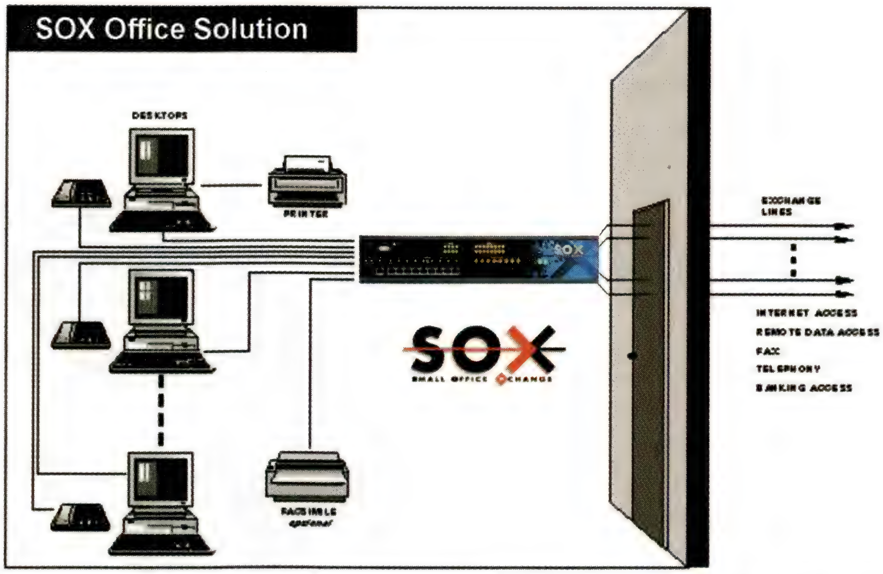


Figure 2. The SOX "Small Office Xchange" Solution

If you need more than eight extensions, you specify a SOX Slave Unit, which adds a further eight LAN ports and extensions. Actually, it has two more LAN ports, but they are used to interconnect additional Slave Units. The maximum number of extensions is 64, namely, such a system would consist of one Master Unit and seven Slave Units.

SOX has several software options. The Automated Attendant includes the system attendant, which can play a greeting and a selection menu to all callers. It is a prerequisite for Voice Mail, which is licensed by the number of users. Caller ID is another useful option, as it not only displays the caller's number on the virtual phone and feature phone, but it can be used by software to pop up a contact record. The IP router facilitates Internet connectivity. The Fax Server, as the name implies, enables SOX users to send and receive faxes.

PBX Features

Let us examine the Private Branch Exchange or PBX features of SOX. Essentially, SOX is an intelligent PBX. It automatically detects and configures itself for standard single-line telephones, which are also known as POTS (Plain Old Telephone System) handsets or Tennyson's fully featured display speakerphones.

SOX can operate as a stand-alone PBX without having to be connected to a personal computer or a server. You have the choice of either analogue or ISDN trunks, or one of each.

If the power fails, the first two analogue trunk lines are usable immediately with a POTS phone. By adding an uninterruptible power supply, you will have plenty of time to get off the phone.

If you choose to install ISDN trunks, you can request a block of phone numbers from the phone company and give everyone a unique, external phone number. This feature is called Direct In-dialling (DID).

If you have analogue trunks, the optional Auto Attendant software can instruct callers to select the desired extension number, or they can choose to speak to the receptionist.

With SOX you can designate your staff into logical groups, such as Sales, Accounts, Help Desk, and so on, or geographical groups, such as Upstairs, Downstairs, Factory, and the like. These concepts are used to create Hunt groups, Paging groups, etc, and are tied to Services, such as Night service, and other timed services, and so on.

A "Hunt" is a group of extensions to which calls can be directed in four ways:

- In a rotary hunt, the calls ring a new extension in sequence, so, for example, the first call goes to operator 1. While operator 1 is busy, the second call goes to operator 2 and so on. This would suit a help desk where operator 1 is the designated expert and operator 2 helps out only when operator 1 is busy.

- In a sequential hunt, the second call goes to operator 2 whether or not operator 1 is still engaged in the first call.
- In a concurrent hunt, all extensions in the hunt group ring simultaneously.
- In a "least used first" hunt, the operator who has handled the least calls gets the next caller.

A "Filter" is used to define what numbers can be dialled and what numbers are blocked. For example, 001 is the start of the international dialling prefix in Australia. If 001 is blocked, then any subsequent digits will be rejected. You can also define exceptions, say, allow 0015 to pass through. This is the international fax gateway prefix.

A designated extension that has been filtered in this manner would be able to make calls to international fax destinations but not, say, voice calls through the 0011 voice gateway.

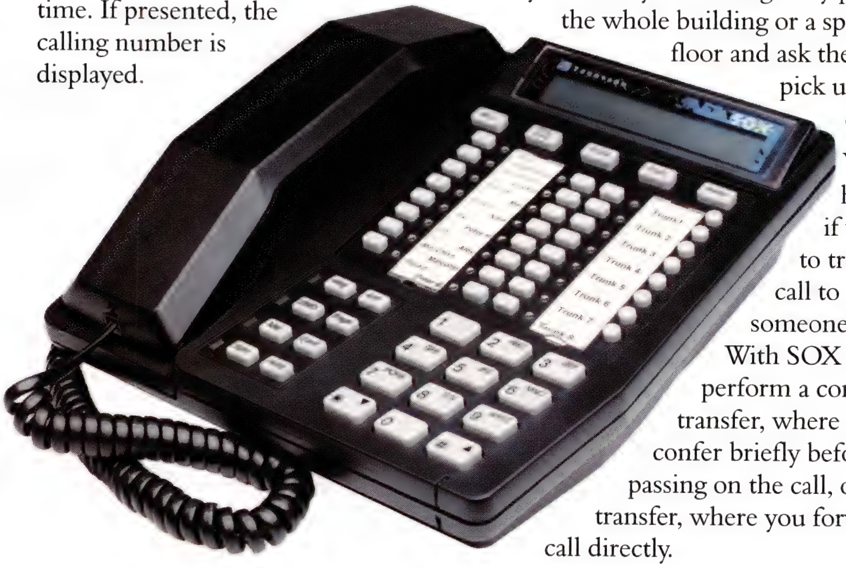
A "Service" enables you to control filters and hunts on a timed basis or manually. For example, a group of people who work late could be designated as the Night Service Group. Their phones are meant to ring when the service is enabled. You would create a concurrent hunt for this group, so their phones would ring simultaneously when a call came in. You could have this service timed differently by the day of the week, for example 6 pm to 9 am weekdays and all day during weekends. While this service would come on automatically at the preset times, it can be disabled manually and can be enabled at other times, say, when the receptionist goes out for lunch.

The Automated Attendant is a powerful option that presently requires a Microsoft Windows NT and Microsoft Exchange Server PC in your network. The auto attendant can be configured to greet callers and present them with a menu of choices. This is known as Interactive Voice Response or IVR. For example, Press 1 for Sales, 2 for Accounts, and so on.

Feature Phone

The SOX Feature Phone is available in a range of colours.

The display panel gives you a wealth of information about the call in real time. If presented, the calling number is displayed.



The menu, which presents several options, is context-sensitive. For example, if you are using the Feature Phone in hands-free mode, pressing the menu key immediately brings up the Speaker Volume menu. If you were using the handset, the Handset Volume menu would be presented, and so on.

An analogue port at the back of the Feature Phone makes it ideal for use by motels and serviced apartments, for example. The guest can plug in a laptop computer's modem without having to unplug the phone. With SOX, there is no confusion and no guesswork.

You can plug in a headset into the side of the Feature Phone if your work involves heavy use of the phone. Several popular third-party headsets are compatible with the SOX Feature Phone.

Virtual Phone

The Virtual Phone (Figure 3) is a graphical user interface that lives on your PC's desktop and gives you an easy way to use the full power of the SOX telephony system. If a call comes in, the Virtual Phone automatically pops back up again so that you can deal with it.

If the phone number of the incoming call is listed in your contact database, or if the Caller ID is presented, the Virtual Phone shows you who is making the call. If you did a Call Pickup for someone who is away from their desk, you could place the caller on hold, while they listened to music. You woul try to reach your colleague by paging the whole building or a specific floor and ask them to pick up the call.

What happens if you wan to transfer a call to someone? With SOX you can perform a consultativ transfer, where you can confer briefly before passing on the call, or a blin transfer, where you forward the call directly.

You have a deadline coming up and you don't want to be disturbed. Just click on an icon and the Call Diversion menu pops up. Choose how you want your calls diverted: in this example you want all calls to be diverted immediately. Where? You could send them to the receptionist or to your voice mail. At other times you might want calls to be diverted when there is no answer, or when your extension is busy, or both.

No more having to remember a complex set of key presses to set up a conference call — just drag the two call icons together in the Virtual Phone on your PC's desktop and you have your conference call up and running. With the Virtual Phone you can see what is going on.

How many times has this happened to you? You've been trying to reach this extension all morning but it has been busy each time. The Virtual Phone has a Camp icon. Just drag the busy extension on it when you receive the busy signal and SOX will monitor the number and call it for you as soon as it is available. No need to keep redialling that extension.

The Park icon enables you to place the caller on hold, say, in park location 2, then page the called party to pick up the call from park location 2. Or you can park them by double-clicking the Line icon.

he Paging facility enables you to make n announcement to the desired paging roup, which can be specific groups of eople or the whole business complex.

Most good phone systems have a speed ial facility. With the comprehensive Microsoft Outlook workgroup and ersonal contact databases integrated with the Virtual Phone, you probably won't need to use the speed dial facility ll that often. But it is nice to know that peed dials are available to your users who do not have a PC in their work pace.

Clicking the Mute button disables the microphone on the Feature Phone and our conversation cannot be heard at he other end. Click it again and you are ack online.

Not only does the Virtual Phone give ou the power and flexibility of the SOX telephony system but it also enables you to access other forms of communications like email, voice mail nd faxes. The mail status bar shows you the number of new email messages, voice mail messages and faxes that you ave waiting for you.

Your Outlook workgroup and personal contact databases enable you to use the full power of the SOX system. You can use the contact databases to make individual calls, set up conference calls or use any other of the extensive SOX telephony features.

Although you can dial your contacts through the Virtual Phone, you can also invoke the dialler directly from Outlook.

Networking

Here's another area where SOX really shines. If you have had anything at all to do with setting up small office computer systems, you will know all about the complexities of local area and wide area networks and internetworking issues.

With SOX, it's all in the box. Just plug in the computers and your Ethernet local area network is up and running. It could be a peer-to-peer network or a server-based network.

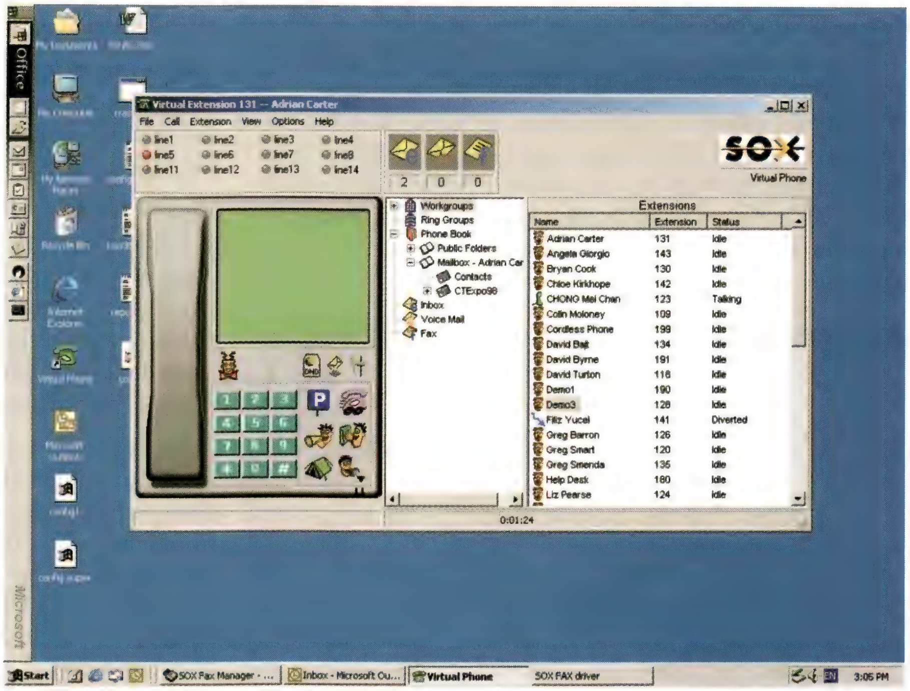
The system also contains a built-in IP router so you can just as easily connect to external networks and the Internet using either ISDN or PSTN trunks. SOX can become the Internet gateway through your ISP, thus enabling access to branch office networks over the Net.

The internal SOX modems facilitate telecommuting. Outbound staff can dial the office through SOX and not only have the usual access to network resources, but they will soon be able to appear as virtual telephone extensions. This means that a virtual office could be created without the need to have all staff physically on site. Just imagine, you are checking your e-mail from some airport lounge and your laptop rings!

You're probably wondering about security at this point. No problem. Not only is access controlled by the use of usernames and passwords, but SOX acts as a firewall, letting the good guys in and the bad guys out.

Standards

The SOX system supports the relevant industry standards and protocols. It acts like a standard Ethernet wiring hub and supports the standard Ethernet and



Extensions

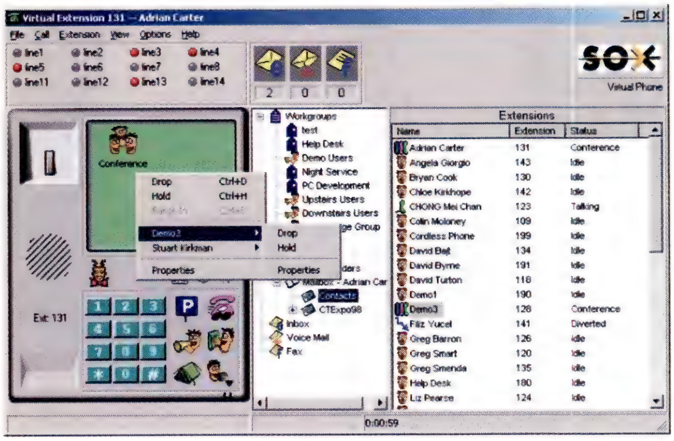
Name	Extension	Status
Adrian Carter	131	Idle
Angela Giorgio	143	Idle
Bryan Cook	130	Idle
Chloe Kirkhope	142	Idle
CHONG Mei Chan	123	Talking
Colin Moloney	109	Idle
Cordless Phone	199	Idle
David Bell	134	Idle
David Byrne	191	Idle
David Turton	118	Idle
Demo1	190	Idle
Demo3	128	Idle
Filiz Yucel	141	Diverted
Greg Barron	126	Idle
Greg Smart	120	Idle
Greg Smenda	136	Idle
Help Desk	180	Idle
Liz Pearse	124	Idle

Figure 3. The SOX Virtual Phone shown onhook, on the Windows desktop.

PRINTER SALES
REPAIRS and SPARE PARTS
Laurie Rooney
Telephone: (03) 9887 4877
Facsimile: (03) 9800 1777
E-mail: intoki@minerva.com.au
Factory 2
9 Sherwood Ct.
WANTIRNA 3152
INTRONICS (AUST) Pty Ltd ACN 070 835 488
OKI-Microline SPECIALISTS
Refurbished Printhead Service
Computer — Printer Cables & Accessories
AUTHORISED OKI SERVICE CENTRE

GST FREE ZONE Trek Nepal
Trek the Himalayas, enjoy exotic Kathmandu, ride the elephants in Chitwan and logon at Internet cafes in Kathmandu, Namche Bazaar with views of Everest and Amadablam or lakeside Pokhaha.
We organise and escort trips to Nepal taking only small groups for the experience of a lifetime.
Om Trek
03 9781 1280
http://travel.to/kathmandu/

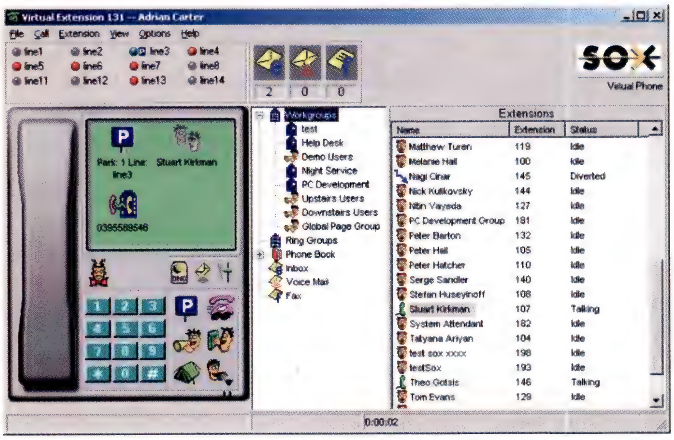
Microsoft Windows NT server technologies. The connections between the computers and the SOX unit are simple twisted pair cables with industry standard RJ connectors at each end. The optional IP router supports protocols such as TCP/IP and Network Address Translation, which renders your internal network invisible to the outside world. While these standards and protocols are important, this technology is completely transparent to the user.



Extensions

Name	Extension	Status
Adrian Carter	131	Conference
Angela Giorgio	143	Idle
Bryan Cook	130	Idle
Chloe Kirkhope	142	Idle
CHONG Mei Chan	123	Talking
Colin Moloney	109	Idle
Cordless Phone	199	Idle
David Beit	134	Idle
David Byrne	191	Idle
David Turton	118	Idle
Demo1	190	Idle
Demo3	128	Conference
Filiz Yucel	141	Diverted
Greg Barron	126	Idle
Greg Smart	120	Idle
Greg Smenda	135	Idle
Help Desk	180	Idle
Liz Pearse	124	Idle

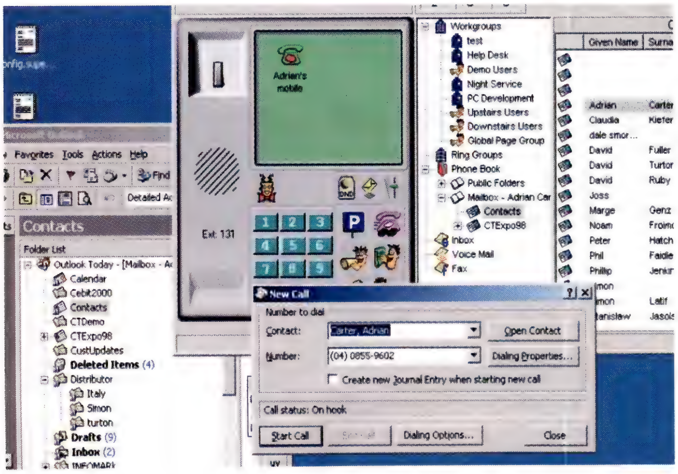
Figure 4. *The SOX Virtual Phone makes setting up and manipulating conference calls simple and foolproof.*



Extensions

Name	Extension	Status
Matthew Turen	119	Idle
Melanie Hall	100	Idle
Nagi Cinar	145	Diverted
Nick Kulikovsky	144	Idle
Nitin Vayeda	127	Idle
PC Development Group	181	Idle
Peter Barton	132	Idle
Peter Hall	105	Idle
Peter Hatcher	110	Idle
Serge Sandler	140	Idle
Stefan Huseyinoff	108	Idle
Stuart Kirkman	107	Talking
System Attendant	182	Idle
Tatyana Ariyan	104	Idle
test sox xxxx	198	Idle
testSox	193	Idle
Theo Gotsis	146	Talking
Tom Evans	129	Idle

Figure 5. *Handling multiple calls using the SOX Virtual Phone is easy because you can see everything at a glance.*



New Call

Number to dial

Contact: Carter, Adrian

Number: (04) 0855-9602

☐ Create new Journal Entry when starting new call

Call status: On hook

Figure 6. *Dialling a Contact directly from Microsoft Outlook Contacts database using the SOX TAPI Service Provider.*

Unified Messaging

The SOX system delivers CTI — computer telephony integration — and nowhere is this more valuable than in the area of unified messaging. In today's business environment, we can receive a wide range of communications and messages.

There's the answering machine, voice mail, faxes and internal and external e-mail. You need to be able to manage all of these types of communications from your desk or from wherever you happen to be. With SOX, all of your messages and communications are stored for you and you can access them from the Virtual Phone on your PC's desktop or from a personal information manager like Microsoft Outlook.

So what about when you are on the road? No problem. With a modem-equipped laptop computer, you can dial into your system and handle all of your communications and messages from wherever you happen to be. Outlook will connect with the office Exchange Server and download all your waiting e-mail, voice mail and faxes. You can access them on your laptop after you have disconnected the call, if you wish, or deal with them on the fly.

The SOX messaging system complies with the Microsoft messaging and telephony APIs and therefore has hooks available to other leading business and office applications.

The SOX system makes using the Internet or intranets a breeze. It provides PSTN and ISDN access and its intelligent router takes care of the interface with your Internet service provider. All of the computers in your office can use the same Internet account and this connection is seamless to the individual user as you would expect. You can have SOX dial the ISP on demand or hold the link up indefinitely.

And there is more to come like Internet telephony. Imagine being able to make a phone call to anywhere in the world for the cost of a local call to your ISP. Or what about video conferencing over the Internet? This is a rapidly growing technology that will soon become a widely used business tool. Of course your SOX box will be ready.

Installation

SOX can be mounted in a 19-inch rack, in a well-ventilated cupboard, on the wall — almost anywhere, in fact.

SOX ships from the factory with a default configuration, ready to use as a PBX long before a single computer is plugged in. You can literally power it up, plug in the trunks and telephones, and you can make your first phone call approximately two minutes after you hit the power switch.

Of course, the installer can personalise a system before delivery, leaving relatively little to be tidied up on the customer premises. Next, install the Virtual Phone on all the PCs. Type in the user's name, password, and IP address, and you are up and running. You can further customise it later. As you would expect, expanding the system is also a snap. Just add expansion modules as you need them, connect them to the base unit and plug in your additional trunks, phones and computers.

Configuration

Configuring SOX is a breeze with the SOX Administrator and its wizards. You can see the entire configuration in a tree view. Click on the appropriate tabs to configure the users, their extensions, their LAN connections, the link to the Internet Service Provider, and so on. This configuration can be done from a laptop connected to the front of the Master Unit, from a PC on the LAN, from a dial-up modem connection, or over the Internet. From an installer's viewpoint, SOX is truly a delight to configure and maintain.

There is also a rich command line interface available for those who need it, but the SOX Administrator will suffice for most tasks.

Assessment

I have barely scratched the surface of SOX's rich PBX features. You will appreciate that SOX will enable you to manage your time and resources and present a very professional image to your callers. A prototype SOX won "Best of Show" awards at CT Expo 1998 and even today there is no close competition on the market. There are some pretenders, but they usually lack some key feature, or have taken the Internet Protocol (IP) telephony approach (and still lack some features).

Even though the design of SOX appears to be of the "all eggs in one basket" variety, it is not. Take off the lid and you will see well-built circuit boards that can be plugged in and out within seconds. The clever feature-card approach enables the four card slots to be populated with modems, PRI card, or anything else that Tennyson's engineers can dream up. This is SOX's future-proofing. The system has its own operating system, so it is not dependent on the vagaries of another manufacturer or the threat of viruses.

Does SOX tie your operations to the Microsoft Windows operating system? Not entirely, except for the fact that its unified messaging features presently require a Windows NT PC equipped with Exchange Server 5.x or later. Users need not even have a PC to use the Feature Phone, such as an employee at the cash register. While the maximum benefit flows to users with Windows 9x/2000/NT Workstation PCs, users with Unix computers can use the Virtual Phone through products such as Citrix MetaFrame.

What if you have some of the components in place, the most likely being an existing LAN hub? Simple — take a LAN cable, connect one end to a spare port on the existing hub and the other to the hub on the SOX unit.

SOX is one of those rare "Australian-designed-and-built" products that deserve to succeed on the local and world markets. To appreciate its real value, you cannot add up the prices of individual, equivalent components and make a meaningful comparison with SOX. The true value comes from SOX's innovation and integration — you will truly save a lot of time and money by buying a solution that works from Day One. You will also appreciate its productivity features that may not have entered your mind when you were looking for "just a phone system". Check it out — Tennyson has a great demo CD that you can request but be sure to mention *PC Update*. Also note the disclaimer below. Although I could not ethically plug SOX last year, now I can do so with a clear conscience and with great enthusiasm.

Where to Buy SOX

SOX costs approximately $7000 ex tax, for a fully-optioned SOX system with eight extensions. Tennyson's sole distributors are MUA Pty Ltd in Australia and Cogent Communications Ltd in New Zealand.

For details, visit the Tennyson web site: *http://www.tennyson.com.au* or phone (03) 9558 9964. Tennyson Technologies Pty Ltd is the wholly-owned subsidiary of Tennyson Holdings Ltd, which is listed (ASX: TNY) on the Australian Stock Exchange.

Disclaimer

Ash Nallawalla was previously a Product Manager at Tennyson Technologies until December 1999 but he and his family own no Tennyson Holdings stock or have any financial interest directly or indirectly with these companies. Ash now works for Selectica Inc (Nasdaq: SLTC), which is based in San Jose, CA. ❑

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The Advent of Computer Telephony

Senator Richard Alston

In 1876 when Alexander Graham Bell uttered the words "Mr Watson come here I want you", the age of telephony was born. While at first the development of the telephone was considered by many as a scientific curiosity, like many other great inventions it has significantly impacted upon society. Today, some 124 years after Mr Bell summoned Mr Watson, there are several hundred million telephones in use throughout the world. Telephony has become an essential part or life, both in business and pleasure.

In 1946 the University of Pennsylvania developed a device known as the Electronic Numerical Integrator and Calculator, or ENIAC for short. While the machine occupied a large room, weighed several tons and its vacuum tubes consumed tens of kilowatts of power, ENIAC marked the beginning of the computer age. The development of the transistor and subsequently the integrated circuit has transformed the world of electronic computing. Super computers of the not too distant future will fit inside a shoebox.

While the first personal computer introduced in the early 1980s offered a significant advances over ENIAC, they had very limited capabilities. Since that time, desktop computational power has dramatically increased and together with other hardware and software developments, we now have personal computers with mind-boggling specifications and capabilities. We see processors operating with clock speeds of 1000 MHz (that is 1,000,000,000 cycles per second), vast amounts of high speed random access memory, multi gigabyte hard disks and enhanced input/output capabilities.

During the 1990s considerable work was undertaken at an international level to develop standards for the digital compression of audio signals and both still and moving images. The simple personal computer of the early 1980s has now been transformed from essentially a text-based device to a high performance multimedia platform. Text, still images, graphics, video and audio can be generated, manipulated and stored by the personal computer.

Connecting a computer to the telephone network with a modem allows the machine access to the Internet, albeit at a relatively low data rate. Obviously higher performance connections are now possible using satellite, cable, wireless and DSL access technologies. Once you are connected to the World Wide Web, your computer can operate as a simple telephone or a videophone terminal. Such capabilities exist because of the multimedia architecture of personal computers and the development of high performance digital compression technologies.

Over the next few years the power of computers will further develop. They will become faster, smaller and cheaper. Operating system and applications software will hopefully further develop to match the improved hardware capabilities. Dedicated digital signal processing technology will further enhance the performance of many computer functions by using dedicated processor elements to perform many specific functions, for example voice recognition and real-time MPEG encoding

A recent national study has found that Australia is well placed to remain at the forefront of international developments in electronic commerce, the Internet and electronic services. The Inquiry wa conducted under the auspices of the Australian Information Economy Advisory Council (AIEAC) and investigated the capability of Australia's telecommunications networks to delive adequate infrastructure support for a full information economy in the future.

The Inquiry found that wholesale price for bandwidth in Australia compared well with some European countries but that prices in the United States were lower. However, Australian prices are expected to fall in all areas over the period of study (2000 to 2004). Price falls of 30 to 50 per cent per annum in wholesale markets can be expected on the more competitive and thicker routes. The report provided vital information to help the Government ensure that affordable, high-speed bandwidth is made available to all Australians. It found there is likely to be adequate bandwidth in the backbone network on most routes to meet the majority of demand scenarios. This is because the network capacity can be expanded due to improvements in technology such as wave division multiplexing which enables the light in a single optic fibre to be split up into different colours and carry many simultaneous communications services at one time.

The report gave a clear indication that Australia's underlying infrastructure is capable of meeting the demands of the information economy.

In fact, as Australia moves into the 21st century, the Coalition Government is playing an integral role in developing dynamic communications and information technology sectors. There re a wide range of grants to support nd encourage development in the T&T industries. For example, the $70 nillion Building Additional Rural Networks (BARN) program will upport the introduction of innovative new telecommunications technologies and services into rural areas.

The program will assist State and Territory Governments and regional communities to aggregate demand for telecommunications services in regional areas and thereby improve the commercial case for enhanced services. These BARNs will promote innovative solutions for service delivery (e.g. wireless and satellite) and provide scope for new commercial entrants to offer services to regional Australia and thereby enhance competition in these areas.

Another important initiative by the Commonwealth to improve access to IT&T infrastructure in regional Australia, is the Internet Access Fund. This will fund projects to stimulate Internet service delivery in regional and rural Australia, in a manner that will enhance the commercial, competitive roll-out of these services. As a result all Australians will have local call access to the Internet, or a reasonable equivalent. Funds will be allocated to establish community-owned Internet points of presence or private sector owned and operated facilities established in partnership with community organisations.

If we look at the world of mobile phones we also see the integration of computers and telephony. While the GSM mobile phone system offers a text based short message service (SMS), the recent completion of the Wireless Application Protocol (WAP) standards will permit future mobile phones to become mobile data centres. The various developers of this technology promise a wide range of capabilities perhaps only limited by the imagination of the user. WAP enabled products will be available during 2000.

Imagine while being out of the office you are able to make use of the Internet from your pocket phone, or will it be integrated into your wristwatch? Voice recognition technology will allow you to compose e-mail messages and dispatch them as required. Your incoming e-mail messages will simply be converted to speech at your command. If you need to navigate the Net for some vital information you will use your head-up display module to view high-resolution web pages.

When you get back to the office you will be able to synchronise your desktop computer with your pocket communications centre (PCC). Blue tooth wireless technology will provide the necessary link between the devices. When you begin you drive home you clip your PCC into its car cradle. It communicates with the car navigation system, checks the road authority databases for traffic delays and signals your home message centre of your expected arrival time. It also checks for any vital messages from your spouse.

The scenarios are endless, as the computational power available in the computer technology of tomorrow is limitless — well almost. Processors operating at multi gigahertz clock speeds combined with high performance wireless technologies offer communications mobility. All information will be reduced to digits that can be passed across the city, state, country or world in the blink of an eye. The merging of computers and telephony during the 1990s will perhaps one day be seen as the equivalent to Mr Bell's first use of the telephone over one hundred years ago — the beginning of a communications revolution. ❑

Computer Swap Meet Schedule

Sunday 30 April

The Camberwell Centre
340 Camberwell Road

Sunday 7 May

Royal Melbourne Show Grounds
Epsom Road, Ascot Vale.
Malvern Town Hall
Corner High Street & Glenferrie Road

Sunday 14 May

Collingwood Town Hall
140 Hoddle Street
Springvale City Hall
397 Springvale Road

Sunday 21 May

The Ivanhoe Centre
275 Upper Heidelberg Road
The Camberwell Centre
340 Camberwell Road

Sunday 28 May

Moorabbin Town Hall
985 Nepean Highway (at South Road)
Box Hill Town Hall
1022 Whitehorse Road

Sunday 4 June

Royal Melbourne Show Grounds
Epsom Road, Ascot Vale.
Malvern Town Hall
Corner High Street & Glenferrie Road

Start at 9.00 am
Finish at 4.30 pm

PC Update will contain details of Swap Meets for the forthcoming six Sundays. For advance dates contact Technology Supermarkets Pty Ltd Phone: 03 9886 1466

Internet Newsletter No 9

George Skarbek, ISP Manager

Since my last newsletter, services have been performing very well and we have no substantial problems apart from one faulty modem card in the bank of digital modems that has temporarily resulted in ten less lines being available.

Although I am associated with the Internet team and must admit some bias, the Internet team believes it has been supplying a very good service to users, especially if price is taken into account. The Internet service is quite complex and all our computers, hubs, routers etc. have continued to work correctly and non-stop to achieve this reliability.

Overall, our recent reliability is substantially better than Telstra's cable service. From my home office and for business purposes use I predominantly use Telstra's cable service for convenience and dial in to Melb PC to perform checks or to get onto the Internet when the cable is down. The cable service drops out at least once and probably twice a week for up to an hour or more per incident. About a month ago it was off for most of the day and this is a service for which Telstra charges $65 per month or $780 pa (recently dropped to $50 per month) but as there are also volume charges, most users will pay more.

Old Intranet lines to be Phased Out

Many of our users may not know much about our Intranet service. It is a service that will allow you to dial in and collect your mail and read news even after you have used all your allocated time for that day. Intranet refers to the internal computer network and as mail and news messages are stored on our servers, these facilities are available. However, to surf the net you must access computers outside the South Melbourne computers by dialling our Internet numbers.

The old analogue Dataplex modems we still own are being used only for Intranet lines. We hope to have these phased out in the near future as some are continuing to give problems despite the team's efforts. However, this does not mean the service will disappear. It will not but the existing phone number 9690 5644 will change and the good news is that the new number will have a bank of 56 kbps modems instead of the existing 33 kbps units. The new number will be posted in advance.

Making Telstra Richer

Some users are still being caught by having their Internet dial up configured for auto-redial and then have that "feature" cut in after they have used up all their allocated time; resulting in a large phone bill.

This can happen without your knowledge if you shut down your browser and mail reader and leave your computer without disconnecting from the Internet. When your allocated time is used up, your line will be disconnected. However, your auto-redial will attempt to do its thing and duly redial and you will be logged on again. Unfortunately for you, our timer checks all accounts every two minutes and your line will be dropped. Undeterred, your auto-redial will do its bit etc. Unfortunately if you are not at the computer when this is happening, you will see the results on your phone bill!

All users are strongly urged to turn off the auto-redial facility in their configuration. This is done from My Computer, Control Panel, Internet Options, Connections tab and then, if you are using Windows 98, highlight each of the diallers set up in the centre window of Dial-up connections. Windows 95 users, from the Connection tab, must click on the Settings button next to "Connect to the Internet using a Modem". For each dialler go to Settings to verify that the proxy settings are correctly set otherwise you may not be able to browse, and then at the bottom of the same window with the proxy settings are the Dial-up settings where the username and password appear. Click on the Advanced button and there the number of redials should be set to 1. Windows 95 users will have these options visible after they have clicked on the Settings button. It is always preferable to have the dialling under your own control than allowing your system to try to anticipate for you.

On this page you have the opportunity set or remove the two Disconnect options. Melb PC does not use any Inactivity Timers at its end — any disconnects due to Inactivity are due to the user settings.

Back to the first Connections tab window, there is a radio button that should be clicked for Never Dial a Connection as this can also stop redialling if you every use more than the one number to dial. If this button is ticked it means that you have to use a dialler (or its shortcut) and not double-click a program icon for dialling in. This encourages individual and flexible dial-in on any of our numbers — or even those of another provider. This means that you can have several browsers and mail readers open simultaneously and not be limited to using just Outlook Express.

Finally, the Internet team members suggest that it does no harm, that it is an advantage to click on the LAN settings button and enter the proxy server settings there even if your PC is stand-alone and not a part of the LAN. This helps overcome the problem of other programs not recognising a Default dialler. In particular Outlook Express will actually drop a connection if it finds you are not on the Default dialler and this causes a drop of connection apparently in readiness for a redial on what it believes to be the "correct" dialler. This step will allow you to read your mail irrespective of which Melb PC number you have dialled. ❑

System that will take you beyond 2000!

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For the Bookshelf

Internet Telephone

By Major Keary

It is interesting that, when voice-over-net (VON) was first introduced to Internet users a somewhat pompous commentator described it as "an inappropriate use of technology". At the time Telstra—along with other telcos—was most concerned about the possible effect on long distance call revenue. Since then professionals have predicted that, within a few years, packet networks will be used for most voice traffic .

The concept relies on two technologies: the conversion of voice to digital data, and the use of packet technology. Packet switching is defined by the ISO as "The process of routing and transferring data by means of addressed packets so that a channel is occupied only during the transmission of a packet; upon completion of the transmission, the channel is made available for the transfer of other packets". Packet technology requires a system that breaks data into manageable blocks (called packets), finds the quickest route for transmission, and delivers them in proper sequence. Usually the data is compressed before sending and uncompressed on arrival.

Using the Internet to make international and long-distance telephone calls is reasonably practical, does not require much more hardware than most Internet users already have and is not difficult to implement. What started out as a hack to avoid the inflated cost of international telephone calls has since attracted serious research and development. Indeed, at least one researcher was working on voice-over-data as early as 1975, almost two decades before VON surfaced.

Visit www.pulver.com for current VON resources for ordinary users. It may seem simple—and the concept is simple—but there are some catches. Packet technology means a file may be broken into parts that each go by a different route. For an ordinary file, such as MONA-LISA.GIF, it doesn't matter if Mona's smile turns up between her nose and her eyebrows. The system provides for some packets to arrive early, some late, and some not at all—a request goes back for a resend. The server holds everything until it can deliver a complete file, in its correct order, to the recipient.

However, a telephone conversation has to move in real time, or very near to it. It's not much of a conversation if you get the middle before you hear the beginning. There is some leeway, but if traffic is heavy a call may simply collapse, something like a mobile phone call from under a railway bridge. The technology is improving, but that brings with it some reliance on commercial services.

In VON's most primitive application it is necessary for the communicating parties to pre-arrange a connection time, much the same as for a chat session. A more sophisticated application involves integration with a telephone system using dedicated servers that can make a server-to-subscriber phone connection.

If Alice, in Melbourne, wants to call Bob, who is in Amsterdam, she uses a browser to open a VON server site in Amsterdam, which makes a connection to Bob's phone using the local telephone system. Alice is on the Web, but Bob is sitting at home on his telephone.

The next step is to use VON servers so that Alice can dial in from home using an ordinary telephone connection; the server uses the Internet to establish a connection with the Amsterdam VON server, which in turn makes a dial-up connection with Bob.

Jeff Pulver conducted some experimental work on a VON-server system and which is described in his book (mentioned below); you can catch up with the latest developments at www.pulver.com.

The literature for general readers is limited. Two books were published, one in 1996 and the other in 1997, both of which provide good accounts of Internet telephony for hobbyists—and small business users—as well as providing software and other resources on companion CDs. The Pulver title is still in print; the one by Kirk is not, but it may be available through Amazon's out-of-print service.

The Internet Phone Connection was written by a computer journalist who had a real need to use VON; she had taken a job in Alaska and the cost of calls to home in Florida was a good incentive to explore Internet telephony, and video. The book is a well-written account of what you need, what's available, and how to use it. The software will, no doubt, have been upgraded since the book was written, but the descriptions and ratings are a useful source of information and where to look. No expertise is assumed, and any technical terms are explained in plain language.

Cheryl Kirk: *The Internet Phone Connection*
ISBN 0-07-882269-6
Published by Osborne McGraw-Hill, 276 pp. + CD

Still in print, *The Internet Telephone Toolkit*, is written by a technologist, Jeff Pulver who took an early interest in VON and is a leading authority. His book is written for users who have no technical background; it works very well, presenting in clear language explanations of how VON works, how it started, and how to get it working. He explores various options and describes the necessary software and devices.

Packages are reviewed and compared, which—even though they may have become obsolete since the time of writing—provides users with a foundation for further enquiries. He also covers video conferencing. The CD contains the software needed to get started. A well presented account for newcomers to the technology.

Jeff Pulver: *The Internet Telephone Toolkit*
ISBN 0-471-16352-X
Published by Wiley, 201 pp. + CD,
RRP $52.95

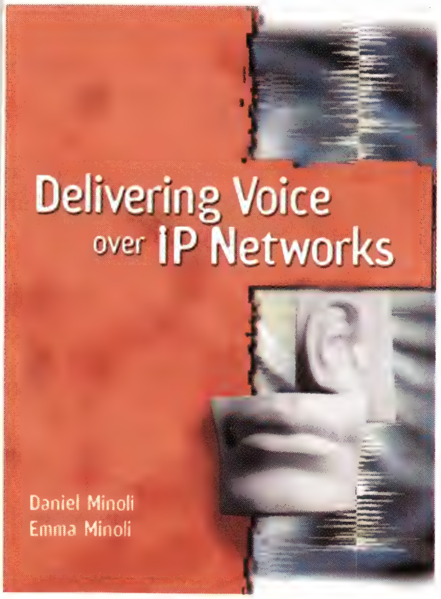
Getting Serious

Like so many technologies, the big boys have been quick at picking up the work of innovators in order to exploit the potential for adding voice capability to networks designed for data transmission. It has become the subject of serious study and a number of professional titles have been published. Two such titles deal with voice over IP, and voice over frame relay and ATM.

Delivering Voice over IP Networks

A considerable amount of work is being done on formulation of standards for voice traffic over packet networks. The question is, which kind of packet network is best? *Delivering Voice over IP Networks* is a professional text that examines the "advantages and disadvantages of IP versus traditional packet networks".

The authors do not put IP forward as the best solution, but discuss it in the context of packet voice communication as a whole. *Delivering Voice over IP Networks* is a thorough technical coverage. An introduction describes drivers for voice over IP, and approaches for IP-based voice systems. That is followed by an overview of IP; this is technical, but one does not need a degree in computer science to follow the discussion. A chapter, Issues in Packet Voice Communication, provides an interesting examination of speaker behaviour models and the practical aspects of *packet voice*. Included is a discussion of the late-packet problem and methods of dealing with it. There are many other issues, and most are accompanied by detailed mathematical explanations. However, non-technical readers should be able to pick up quite a lot from the well-written text.



In a chapter, Voice Technologies for Packet-Based Voice Applications, the authors summarise voice digitisation and compression methodologies. That is followed by a chapter on *vocoding* (voice coding) that describes the technology and standards.

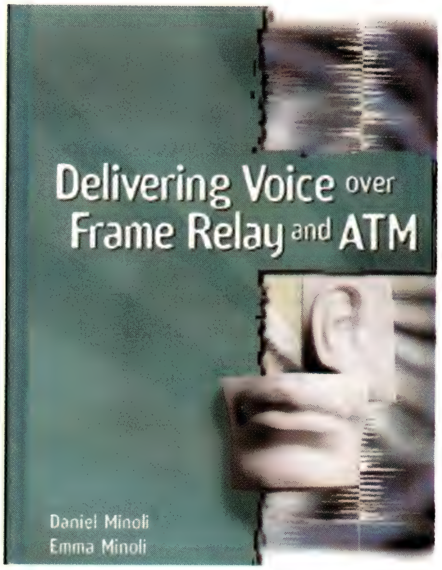
Even if you don't read those first chapters, the one on *Voice over IP and the Internet* is an excellent overview that brings everything one needs to understand in order to make a decision: is IP the way to go? The supporting illustrations are helpful and should provide a good model for those with a need to set up presentations for teaching or selling.

This text is for those engaged in, or who want to study, the process of establishing standards and protocols, and architectures to support voice over IP networks. It is also about achieving voice quality standards, optimum compression methods, and support hardware. There is useful discussion of market considerations and regulatory issues, and a description of some VON products.

Daniel and Emma Minoli: *Delivering Voice over IP Networks*
ISBN 0-471-25482-7
Published by Wiley, 276 pp.,
RRP $85.00

Voice over Frame Relay and ATM

Delivering Voice over Frame Relay and ATM discusses the use of frame relay and ATM for voice traffic, its advantages and disadvantages, and makes comparisons with voice-over-IP. An introductory chapter is an excellent overview of voice communication and the development of voice over packet networks—specifically IP, ATM, and frame relay. Even if you have no technical background, it is a good introduction to the technology, where it stands and where it is going. A substantial part of the book is a tutorial on telephony, designed for network managers. Having established the telephony groundwork, the authors then move to voice-over-frame-relay; the discussion is in the context of the Frame Relay Forum (FRF) Implementation Agreement for Voice over Frame Relay. Some URLs are mentioned in the text, but since publication they are no longer relevant.



Because frame relay was not designed with voice in mind, there are a number of problems (all discussed in depth). However, the potential economic benefit of voice-over-frame relay has made it worth while to find ways of overcoming those problems. The treatment of frame relay may seem brief compared to the space devoted to ATM, but many frame relay networks are now integrated with ATM. The authors cover circuit emulation service, dynamic bandwidth utilisation, internetworking with narrow band/ISDN services, voice telephony over ATM to the desktop, and adapting voice for ATM networks. Readers are well served with diagrams and charts ideal as models for presentations.

Engineering requirements are discussed in the context of upgrading a data network to accommodate voice. The pros and cons are examined in an objective manner, providing network managers with in-depth information about technologies required for voice-over-data: voice characteristics, compression, and quality of service (QoS).

An essential guide for anyone who has to make decisions about using frame relay and/or ATM for voice.

Daniel and Emma Minoli: *Delivering Voice over Frame Relay and ATM*
ISBN 0-471-25481-9
Published by Wiley, 460 pp.,
RRP $105.00

The Late Packet Problem

Packet delay is not the same as the problem posed by raw Internet telephony in which packets may be affected by the vagaries of diverse routing. There is another, unavoidable, cause of delay: the process of encoding speech into digital data and compressing it. In the professional titles mentioned here, when packet delay is discussed it refers to the encoding/compression process.

Advanced Internet Technologies was reviewed in *PC Update*, March 2000. It is a professional text for engineers on packet-switched Internet communications.

The author makes the point that in respect of VON there are three factors in achieving QoS: packet delay, bandwidth, and computational effort. The acceptable delay limit is 150 milliseconds, which translates to 300 ms for a "round trip delay"; at that level the human ear cannot detect the effect of any delay, but at 500 ms it is quite noticeable, and is unacceptable at 800 ms. Present Internet technologies, he says, are unable to consistently meet the 150 ms benchmark. That is not to say it can't be done, and the book discusses the relevant issues.

Uyless Black: *Advanced Internet Technologies*
ISBN0-13-759515-8
Published by Prentice Hall, 346 pp., hardcover,
RRP $99.95 ❑

Crackling, Humming and Phantom Calls

An experience with line noise

by Chris Prestwich

My first experience with using modems was an Internet connection to CompuServe. Not being familiar with modems, the Internet and such I thought the failed connects, the bad connections, the kick-offs and irregular download speeds were par for the course. I asked many times about such things but was informed "the Internet is like that". It must be stated here that I live at Upwey. I'm not out in the sticks at the 23 km post on the far side of Timbuktu. Upwey is very much within the Melbourne and Metropolitan area.

Anyway, when I asked CompuServe about the slow times for pages to appear when just browsing sites, I was told that the browser supplied by CompuServe was only a basic Mosaic browser. In hindsight, it was nothing whatsoever to do with the browser.

Later I joined Melb PC and bonded with the BBS, only to find similar problems there. The most noticeable was hieroglyphics, well, the "random characters". They appeared on the screen as though someone was holding down keys on my keyboard when I was connected. It made messaging and most other aspects of using the BBS very difficult. After I discovered the cause it was very easy to tell when the line was really bad. The opening screen of the BBS would be masses of random characters instead of the nice screen design. With the bad lines connection speeds varied incredibly.

I left my original ISP and started with the Melb PC Internet service and the problems continued exactly as they had done before. I began to think this Internet idea was a waste of time.

Then the phone problems that initially I thought were standard features, started getting worse. We had crackling, humming and sometimes phantom calls when there was nobody on the other end. Soon we were unable to hear some calls at all. By now the crackling and humming were quite audible.

We had some building works happening — a separate story. I decided to wait until the building work was finished and sort things out afterwards. Well, three years later (this story spans a six year period), the building was finished and I ordered a new line for the modem, I specified to Telstra it was for modem use because I had been advised to tell them that. At the same time I had the existing Telstra wire under the house replaced to ensure it was free of any damage or bad connections that might have resulted from the building work. I did mention all the noises we'd been having.

The problems continued. I complained that the new connection was as bad as the old one and that I needed it for modem use. Only at this point did they tell me "there is no difference in the connection types".

Anyway, the battle started. The noises were intermittent and although a technician would be able to hear it when I rang and reported the noise, when a technician came on site of course the noise wasn't there. I grew heartily sick and tired of being told there wasn't a problem.

Every time a technician came out, it was a different person and we had to explain the whole thing over and over again. The first thing they all said was, "It's your equipment." Sorry guys, that's all been checked. Every time I reported a fault at that stage the only equipment connected was a Telstra TouchFone 400 handset and they could hear the humming. The modem was checked, it was sent off to NSW and back. The other equipment was checked over the phone with the supplier's service department. But the TouchFone 400?

So the problems continued, as did my omplaints. The wiring under the house was replaced again. The first technician was a real cowboy; ex-Telstra and now a ubcontractor he did a friend's second ine that same day and couldn't figure but why she kept losing Internet connections when the phone rang. “Call waiting” was on and he had connected her modem to her handset line. Thank you very much. My wiring was now first class, not the rat's nest that it had been previously, so I took the initiative and plugged her's in correctly.

One technician tried another line connection from the pole outside my house to the pillar down the road, but the problems persisted. He traced it back to the exchange and connected me to a new block down there. No different. All tests, impedance, earth to A leg, etc. all checked out okay. No faults found.

“What about the phantom calls?” I asked. People would call, well the phone would ring but when I picked it up there would be silence. One day a friend called — I didn't know who it was at the time — I couldn't hear anything so I asked “Can you please hang on, I'm calling Telstra on the other line to report this”. Even though my friend hung on for about an hour, Telstra couldn't trace the call. They couldn't even find there that was a call connected! Now that's a worry. Meanwhile my friend had rung my wife on her mobile with his mobile and told her what was going on. That's how I found out about the other end of the call. He could hear everything I said too and that's another worry.

The troubles went on because they couldn't find any fault. The problem was elevated to a Level 3 Technical Fault and even that didn't help. No, I'm sorry, it did help but it took about 12 months. I had a technician out here with a laptop computer and a Tassie Devil modem. He informed me if he could get a good connection at 2400 bps or faster [see addendum following] then the line was good. Yes, I understand, regulations. But, at that speed nobody would use the Internet. Just imagine downloading Netscape or IE5 at that rate!

On this occasion he obtained a good connection, 50 kbit/s. I tried mine and got 44 kbit/s. But I explained once again “The noise was intermittent”. “Well, it's okay now” he said, and off he went. I complained and complained and complained and eventually they found a small fault.

Hey Presto! A new block down at the exchange for both lines, but guess what — call waiting doesn't work. This was replaced with another block. Oops! 75 volts — a tad high. Two more blocks and finally we are working. No more humming, no more phantom calls, no crackling and regular, good connections. My Netcomm Roadster Ultra SVD AM5690 connects at 50 kbit/s just about every time. Occasionally I get only 49 kbit/s but I don't complain because I'm sick of doing that.

Apology? I can't be bothered, I've had enough with asking for things.

Now when I dial Melb PC we connect very quickly. Now I know that a delay from the modem answering and the “actual” connect can be the modems trying to handshake and if the noise is too bad, one or both of the modems will give up and disconnect even before the “checking user name and password” appears on screen, sometimes even after that.

Addendum:
Clause 1.3.2 in “A Guide to Telstra's Services” states that one can expect facsimile and data calls to be successfully transmitted across Telstra's fixed network at a speed of at least 2400 bits per second when one is using a facsimile or data modem that conforms to international standards V.18, V.21, V.27 ter, or V.34.

About the author:
Chris Prestwich, chrisso@melbpc.org.au developed a keen interest in all things technical from about the age of ten. He studied the Certificate of Technology (Electronics) at Box Hill TAFE and later completed a variety of computer and electronic courses at RMIT. Chris has worked in the computer operations and electronic engineering sections of a major Defence Department facility and the IT Department of the Victoria Police. ❑

Microsoft Combat Flight Simulator

Taking that Gift Horse for a Canter

By Graham Lawrence

My somewhat critical review of this game in *PC Update*, April 2000 stressed two factors. Firstly the sloppy flight modelling and secondly the program ran so poorly on a computer that exceeded the listed system requirements.

Nothing can be done about the first, but the second can been addressed by a system upgrade and since writing that review I have upgraded my machine. A J-7BXAS motherboard, PII 400 MMX, 3D Blaster Voodoo2 and Matrox Millennium G200 are now toiling away with 128 MB of PC100 RAM

Running a Norton speed check under DOS shows the new system clocks 1003.7 relative to the old P150's reading of 475.8.

It was a little disappointing to discover that this was still not sufficient to run the program smoothly with the highest settings selected. However, by turning off some of the least important features and opting for “normal” rather than “very dense” ground texture, the game still looks good and plays smoothly in most situations. The new hardware has also fixed the gun firing delay problem and the new graphical ability portrays aircraft fragments flying in all directions as the bullets and shells do their work.

It's really quite good, but I still think it needs a PIII 500 and one of the latest graphics cards to get it out of a canter and into a full gallop. ❑

Members. Here is something you could hand around to your friends and acquaintances. Write your details in the *"How did you learn About Melb PC"* box opposite, then photocopy and distribute freely.

Why You Should Join Melbourne PC User Group

Melbourne PC User Group is many things to many people, after all it is the second largest user group in the world! Even though each of our thousands of members has a unique experience of Melb PC, we have a common belief in the value of computer users helping other computer users.

Helping Them Do What?

The list is almost endless — some of the things Melb PC is best known for are:

Support

Practical and emotional support. Whether you're trying to install a new operating system, a hard drive, a word processor or flight simulator, someone at Melb PC has been there and done that. You may find a whole group of people who meet regularly to discuss the very problem you are experiencing.

Meeting

One of the ways Melb PC helps its members support each other is through meetings. Within its diverse membership you'll find novices, old hands and everyone in between. Whatever you're trying to do, there's someone to help you. As a member of Melb PC you'll also have the opportunity to meet industry leaders and technical experts representing major software and hardware vendors. They'll answer your questions and demonstrate the latest developments in computing technology, often before the general public gets the news.

Teaching, Learning and Enjoying

As an organisation, Melb PC with its range of skills and knowledge provides a range of formal and informal opportunities for teaching and learning new computing skills. So whatever the reason you use a computer, Melb PC helps you enjoy it more!

How?

Melb PC's greatest strength is its membership. With around 11,000 members, it is the world's second largest PC User Group. It was founded in 1984 and is still run by and for its members, people like yourself. Although Melb PC employs some staff, many activities such as maintaining the group's online services, organising monthly meetings etc., are performed by volunteers.

Who Belongs To Melb PC?

Anyone who uses a computer at work, school or play. Parents, children, grandparents and singles. Beginners, old hands, youngsters and oldies. Teachers, students, business operators, secretaries, CEOs, doctors, lawyers, plumbers, electricians, builders, pilots, writers, editors, engineers, journalists, accountants and more! You name it, Melb PC's members do it. Your membership is your key to a vast store of knowledge, an invaluable information resource and help in many fields. Your benefits of membership come to you in many ways throughout the year:

PC Update

Eleven times a year, Melb PC's magazine *PC Update* brings you news about computer hardware, software and how your fellow members use these to achieve their goals. You'll read about members' experiences, learning from their successes and mistakes. Each issue also covers the group's regular activities and any special "members only" events or offers the group has arranged. Your yearly Melb PC membership includes *PC Update* delivered.

Computer First-Aid and Dial Help

Free vendor support is becoming scarcer every year. It's no wonder many members find these two services, alone, worth the cost of membership. These are *"members only"* services. Experienced volunteers share their time and knowledge to help fellow members work through problems. Just knowing there is someone to call gives some members the courage to try something new.

Internet Access

The Internet is the foundation of the communication revolution and the key to success in the new millennium. Melb PC pioneered the provision of affordable Internet access and remains an acknowledged leader offering very competitively priced Internet access to members. The fast and reliable service provides connection speeds up to 56 kbps, with preconfigured software for ease of installation, helpful technical support, and is constantly evolving in pace with emerging technology.

Training

Whether you're an absolute beginner planning to buy your first computer or a power user looking to update your skills, Melb PC has a training course for you. Most courses are hands on, conducted in Melb PC's own, modern, Pentium-equipped training centre. These courses are *"members only"* so they are cost-competitive compared to similar courses elsewhere. Each month *PC Update* contains details of forthcoming courses.

Meetings

Our main monthly meetings include presentations by leading computer hardware and software vendors to Melb PC members and their guests. Speakers have included industry giants such as Bill Gates, Philippe Kahn and Gordon Eubanks, as well as the CEOs and senior managers from major Australian and overseas vendors.

Members win software worth thousands of dollars at these meetings. The meeting provides an opportunity for attendees to ask questions and get to know your fellow members better. With hundreds of members attending, the meetings are great for exploring your fellow members' problem-solving skills.

SIGs

If big groups aren't for you, or if you have a special interest, Special Interest Groups (SIGs) may be your thing. A SIG can deal with any topic, from a particular application to hardware, programming, or how to get the best from your equipment. Check a current issue of PC Update for meeting dates, locations, contact information and information about future events.

Bulletin Board

For a different style of electronic communications our group operates a free multiline Bulletin Board System (BBS) on 9699 6611. (You can dial in with your modem using Windows HyperTerminal, supplied with Windows.) There are numerous Freeware and Shareware files available to download.

Members can use the BBS to send messages around the world (in message forums similar to Internet Newsgroups), or to other members. Realtime online chatting with other members is also available.

Reference and Software Libraries

Members can browse or borrow books and magazines. An extensive range of shareware and freeware programs are reviewed in PC Update and are available on disk from the shareware library.

Whether you are an individual, family or company, one thing is clear. If you want to get the most from your computing experience, a Melb PC membership is a must.

Melbourne PC User Group Inc.

Ref: PCU0500

MEMBERSHIP APPLICATION / RENEWAL

Membership Type

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- **F Family**
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- **S Student**
- **B Pensioner**

Title — **Mr., Mrs., Ms., Miss etc**

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B/H Phone

Suburb

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Additional Family or Corporate Members only

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B/H Phone

B/H Phone

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I hereby apply for membership of Melbourne PC User Group Inc (A0003293V) and agree to abide by its rules while I am a member.

Signature

Date

I do ☐ ***do not*** ☐ ***wish to receive occasional promotional mail from commercial organizations.***

How did you learn about Melb PC? Please complete.

PC Update ☐ **Swap Meet** ☐ **Friend** ☐ Other

Introduced by a Melb PC member

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Type	Number	New (Tick)	Renewal (Tick)	Amount
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Corporate One membership is two representatives	**1**	**$130** ☐	**$120** ☐	**$**
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or				
Pensioner (See notes)	**1**	**$50** ☐	**$40** ☐	**$**
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Notes:

- Students must attach a photocopy of student card or a letter from their educational Institution confirming full-time student status.
- Pensioners must attach a photocopy of both sides of their Pension Concession Card.
- Corporate members may change representatives by giving notice in writing to The Secretary.

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☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name on Card ____________________

Signature ____________________ **Date** ____________

Shareware Order Form

These are some of the most popular volumes in the Melb PC Shareware/Freeware library. Refer to the regular catalogue updates in PC Update for up-to-date listings of other disks. Use the blank section of this form for your choice from those listings.

Shareware/PD Title	Melb No.	Qty.	Amount
Shareware catalogue & New Member Disk	0000		
Graphics Workshop for DOS	8015		
Graphics Workshop for Windows 3.x	8064		
Graphics Workshop for Windows 95	8562		
Growit	8157		
List	1490		
McAfee VirusScan for DOS	8018		
McAfee VirusScan for Windows 3.x(3-disk set)	8897-8899		
McAfee VirusScan for Windows 95 (4-disk set)	8893-8896		
MS-DOS 6.22 Stepup from 6.0 (3-disk set)	8110-8112		
PKZip/PKUnzip	1235		
Real Audio Player for Windows 3.x	8364		
Real Audio Player for Windows 95	8592		
Telix for DOS	8062		
Telix for Windows v1.00 (2-disk set)	8129-8130		
Wolfenstein Fights Street Fighter II	8012		
Melb PC Internet kit (special price)			
Windows 3.x @ $10 per set (3-disk set)	8711-8713		
Melb PC Internet Setup Master (Win 95/98)	9192		
Postage/Packing is included. Costs: first disk (per order) $5, second disk $4, third and subsequent disks $3 each	**TOTAL**		

Training Order Form

Course Title	Starting Date	Amount
	TOTAL	

For Shareware and Training, use the remittance form on the back of this page.

Media Studio Pro — The Evolution Continues

Lawrie Weston

Media Studio Pro is a Non-Linear video editing software suite. The two major programs are *Video Capture* and *Video Editor*. The remaining programs are *Video Paint*, *CG Infinity* and *Audio Editor*.

Background

Non Linear Video Editing (NLVE) is now available to anyone with a easonable PC. In the past it was considered the province of *experts* or people with more money than sense. This was because of the demands put on a system by this form of video editing hat required special AV rated SCSI hard disks and powerful computers.

As a result of Moore's Law, the standard computer you would buy today is the powerful unit of a few years ago. With ATA66, 7200rpm IDE drives now offering sufficient performance there is no longer the need for special hard disks. One thing about NLVE is that you still need large hard disks. The preferred method is to have a HD of at least 8-10 GB dedicated to grabbing and storing footage. The main HD of the system can hold all the programs.

With NLVE the footage from a camcorder is converted to digital information which is then stored and processed in the computer. In the case of DV where the conversion has been done in the camcorder the information is transferred to the PC. A special card in the PC either converts or transfers the signal from the camcorder. A capture program controls the input signal to the PC. Once in the PC the video is manipulated by a video editing program, which also creates a video file that can be output via the card to a VCR, or back to camcorders that have input capability.

In addition a video can be output in the form of files that can be read on another, suitable PC. Current graphics cards and Windows Media Player can display these videos and they can even be incorporated into PC presentations. The usual forms are *.avi* (Audio Video Interlaced) *.mpg* (MPEG — Motion Picture Experts Group) and *.vcd* (Video CD). There are several others.

Media Studio Pro is a suite of programs used to capture, manipulate and output the video. My first experience with Media Studio Pro came at version 2.5, which I still use from time to time as it contains some nice programs no longer provided. As the suite was developed to versions 5 and now 6, the publishers focussed on what it did best, video editing. Some programs in version 2.5 like *Album*, *Image Editor*, *Morph Editor* and *Screen Capture* (used for the illustrations in this article) dropped off, but those that remained grew into a powerful, truly professional suite that enables the consumer level video editor to produce results similar to that seen in the TV industry.

With Version 5 came *Smart Render* which sped up production times. When a video contains transitions, titles etc. they have to be rendered into the original footage. The earlier versions rendered the footage as well as the effects. *Smart Render* applied this process only where it was required. Original footage without effects or filters was just transferred directly from the source files when the final *.avi* file was created.

The notable improvement in Version 5.2 was the inclusion of MPEG 1 editing. This enabled you to put short videos on CD ROM to send by post. Anyone with a PC capable of showing MPEG files can view them.

Now we have version 6 and the changes continue.

Version 6 has five programs:

Video Capture allows the capture of analog, digital and MPEG2 signals dependent upon which capture boards are installed.

Video Editor is the core program where you combine all the elements from the other programs to create a final video.

Video Paint allows you to alter each frame of a sequence, individually.

CG Infinity creates dazzling title sequences and graphics animations

Audio Editor gives you command over the soundtrack with drag and drop ease.

These features will be covered later but first a brief look at improvements I have noticed in this new version.

What's New?

The first change you will see is there are now three windows at the top: *Source*, *Preview* and *Production Library*. The workspace is completely customisable, with floating timelines and toolbars etc. enabling you to change the default layout. As with most new versions the main improvements are internal. Somehow the work seems to be easier and quicker.

Smart Render has been improved, both in speed and quality.

Transitions and overlays look better and render faster. The 2 GB file limit is now a thing of the past. When you trim a clip with *Smart Trim* enabled, the original file is also trimmed, freeing up hard disk space. *Smart Check* and *Convert* is one new feature I'm impressed with because my video capture board uses a non-standard frame size. In the past I had to go through the whole project to make sure all the clips were my size (704x576) or the program wouldn't be able to create the video. *Smart Check* and *Convert* now does this for me. The non-optimised file list displays any clips of non-project dimensions or frame rate. All I have to do is click and the program resizes them for me.

Tracks on the timeline can now be locked and temporarily hidden.

There are now three modes of ripple editing. No Ripple, Single-Track Ripple and Multi-Track Ripple which allow smoother insertion of clips in the timeline. *Ripple* allows push-away or trim when inserting a clip into a smaller space.

There is a new auto audio cross-fade. If two audio tracks are overlaid a click will set fade out on one and fade in on the other.

There are now 2 MPEG standards, MPEG 1 (video CD) and MPEG 2 (DVD)

First Observations

While not wishing this article to become a manual I would like to pass on a few of my initial observations on the suite of programs.

Video Capture

The main difference in the capture program is now in the Setup menu. Figure 2 shows the program now has a Switch Capture Plug-in option. It also shows a device control. You will notice a fly-out showing that the capture program has detected my video input device. Before enabling the capture program, I fed a video signal to the input of my capture card and the program detected the signal and set up the capture driver for my card.

If I had an MPEG2 or DV card in my PC as well I could choose between input devices. Of course until that MPEG2 or DV card is actually installed I can only assume that to be the case, as claimed in the printed material.

Using the capture program is much like the previous versions. You can give the capture a file name to capture to or just use the default capture.avi and later save it as something more specific. Having overwritten capture.avi in the past I recommend the former procedure.

Video Editor

As mentioned earlier there are three windows at the top of the screen Source, Preview and Production Library.

The Production Library has six production tools. Each has its own set of options. You will notice in Figure 3 that *Transition Effect* has 13 options including *Custom* which is where you would put plug-ins if the 100 and more transitions already in the program are not enough. I have clicked on *Wipe* and the window displays the various wipes available.

Other Production Library tools are. *Project*, *Media Library*, *Moving Path*, *Video Filter* and *Audio Filter*. If you bring clips required for the project into the *Media Library*, you have a thumbnail of the first frame. This is often better than just a file name. You can then drag the clip either to the Source window and play it to mark the in and out points, or just drag it straight onto to the timeline. Double clicking a clip on the timeline places it in the Source window.

You will note that there is a control knob and a slider to navigate the clip you are viewing. This is where I found my only disappointment so far.

In version 5, I bring to the timeline a long clip where there is a lot of cutting out to be done, then double click on the clip. I use the slider and next frame, last frame buttons on the pop-up viewer to locate and list on a sheet of paper the sections I wish to remove. In single frame zoom I then find those points and use the scissors and selection tools to remove those sections I no longer want. Then I'm left with a number of individual clips.

When I try this procedure in version 6, the Source window goes black when I try to use the slider or single frame keys. It is only when I use the control knob that I am able to move back and forth while able to see the frames. The sample files work okay with the slider, but files created by my capture card fail. I mention this as it is an obvious hardware/software issue that others may encounter. I have e-mailed U-Lead technical support for an answer and doubtless it will eventually appear on their FAQ page.

The previewing is noticeably smoother and I have used it as a workaround for my problem. I don't use the preview window to view the entire source file for two reasons.

1. It takes too long to render a preview and 2. The display is not as smooth

Figure 1. Video Capture

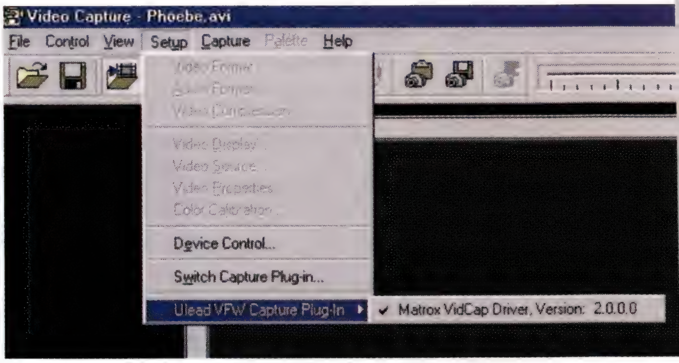


Figure 2. Switch Capture Plug-in Option.

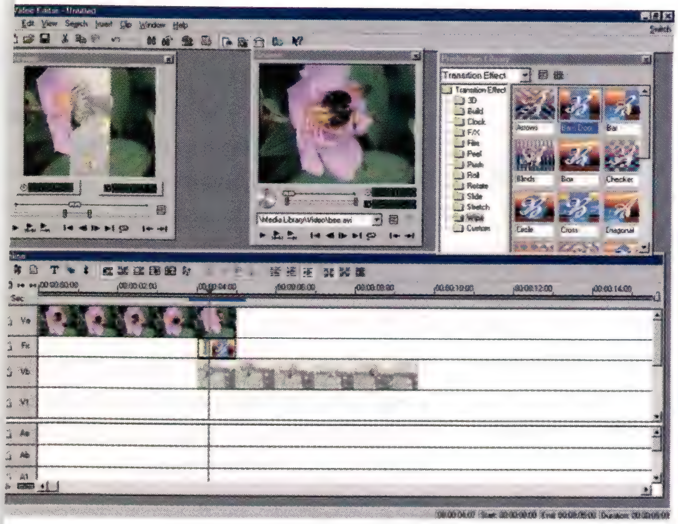


Figure 3. Transition Effect — has 13 options.

when compared to the Source window because I have to use the preview track at the top of the window as a slider.

What do I like?

Nice features I have noticed so far are as follows.

1.) When you cut out a selection of frames on a timeline video track, gaps are automatically closed. Previously one had to find and delete gaps left after multiple trims.

2.) Tracks can be locked to prevent accidental cuts.

3.) Zooming is now easier. All you do now is click on the zoom tool and then a left click on the clip zooms in. Holding the shift key while clicking zooms out. Another method is to use the '+' and '-' keys on the numeric keypad. Of course one can still use a drop down menu to select a particular zoom level.

4.) If you want to preview a short selection (usually to check an effect) you have only to highlight the selection and press the space bar.

5.) When two audio tracks overlay, two clicks give an auto fade from one to the other.

6.) The Switch menu automatically incorporated the older programs from version 2.5 that are not in the current version. In fact it seems to look for and include all U-Lead programs on my PC. Refer Figure 4.

Doubtless with time I'll find more in the Edit program that is not already covered in this article.

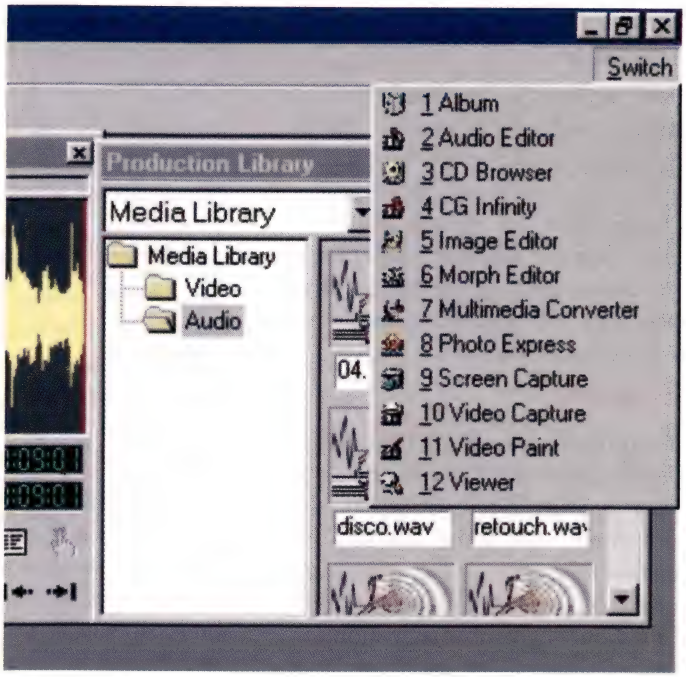


Figure 4. Older programs automatically incorporated.

Video Paint

First appearing in version 5 and enhanced in version 6, Video Paint is a quick method of altering a sequence of frames. You grab a sequence of frames and then step to and alter each as required. If the same item, (eg. a logo) is required over a sequence of frames you add it to the first frame and then use *Power Duplicate* to apply it to the remaining frames of the sequence. I don't use this program much but it has been useful in the past when I wanted to remove an annoying elbow or top of someone's head, which appears for a short time in a clip. Those familiar with photo manipulation will understand the

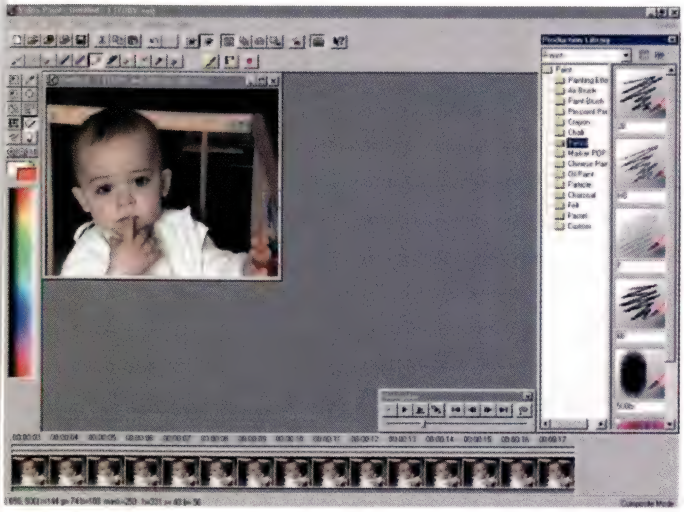


Figure 5. Video Paint

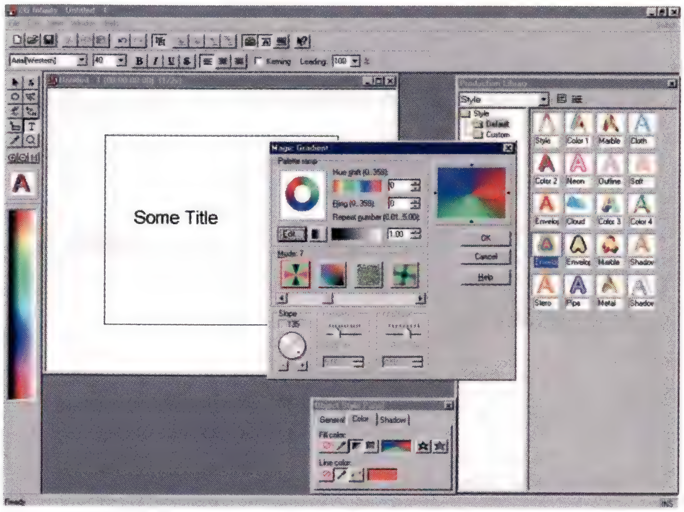


Figure 6. A few of the options available in CG Infinity.

variety of corrections that are available to the frames.

There is a limit to the number of frames that Paint can handle so before you open a sequence you have to specify the duration of the sequence. A handy little preview window allows you to find the particular sequence of frames you want. If you find you have opened too many you can remove some by altering the duration.

CG Infinity

This program allows you to really go over the top with titles and objects flying around the screen and into the third dimension. With *Enveloping*, *Gradient Fills*, *Hue Shifting* and several other tools at your disposal you are limited only by your imagination. Figure 6 shows just a small sample of options available for titles. You can also create your own effects. By combining an object with a title I will began to understand just how some of those TV Station logos can be done.

Audio Editing

In Figure 7 you can see that there is already an amount of control over an audio track within the Video Editor program. You can raise or lower the volume, cross-fade, insert silence, mix multiple tracks and do many other things to your audio tracks. You may well ask, then why is there also an *Audio Editor* in the Suite?

The simple answer could be *"Just because...!"* Many people want a little more to make their video special and introduction of creative manipulation of a sound track could give them what they want.

You will notice in Figure 8 that the audio track is presented as two channels on the Audio Editor screen.

In the *Video Editor* program (refer back to Figure 7) although the audio track is usually stereo, it is represented by one waveform. This means that in the *Video Editor* program both tracks are treated the same. Left and right channels are raised, lowered and faded by the same amount.

In the *Audio Editor* program you can work on each channel separately. When you split a stereo track it creates two mono tracks, which can then be worked on separately. When you click the merge option while one of the mono tracks is active, the program merges with the remaining mono track to create a new stereo track with the modifications.

You can also use the *Audio Editor* to make your own music tracks and voiceover tracks. If you have an old recording with background noise in the silent parts you can use the *Remove Noise* option. You select a section by dragging over it with a mouse and so on. In Figure 8 the third button is very useful as it plays only the selection. The main play button will play the entire track.

On first test, I noticed that while I was able to open and manipulate MP3 tracks then save them as Wave files, It didn't appear to be able to convert *.wav* to *.mp3*. The only other save as option I could find was *.mpa*. Saving the same *.mp3* file as both *.wav* and *.mpa* I notice that the latter was much larger than the former. Although it is possible to use the program to convert an *.mp3* file to *.wav*, there is really no point as the *Vide Editor* program accepts *.mp3* in the audio track.

Conclusions

The upgrade cost me $399 and I believ it was money well spent. I still have to sort out the one niggling problem. Still having the older programs allows me to use them for that task until there is a fi available.

The box contained two CDs and a comprehensive manual with a tutorial section at the front. There are sample files on the CD to use with the tutorial.

I have looked only at the main CD so far and can see there are lots of goodies on the second CD. I think they must b all lite versions, but haven't checked.

What I like most about Media Studio Pro is that it still is a very intuitive program and you can usually do things the way you think you should. After learning from a few early mistakes a beginner will soon become a power user producing quality home videos. Professional Videographers will also find this program suite meets their needs. ❑

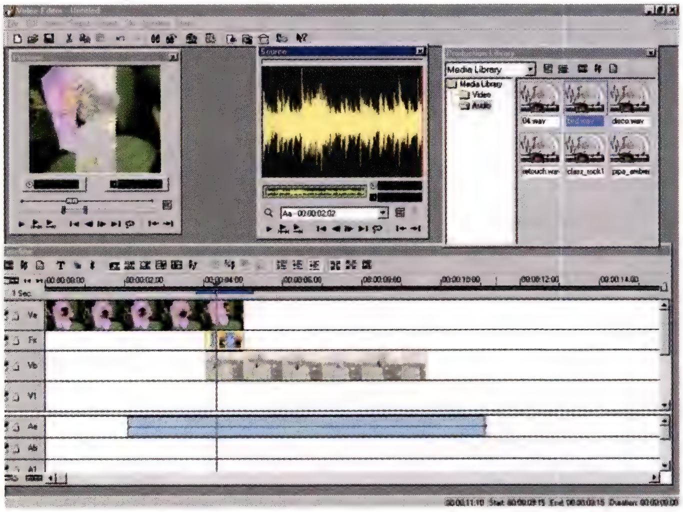


Figure 7. Audio Editing.

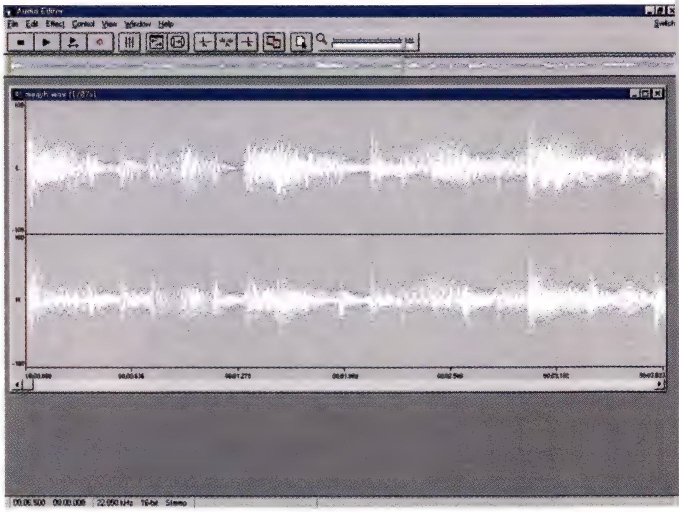


Figure 8. Audio Editor enables work on each of the two mono tracks.

Norton Internet Security 2000

Bernadette Houghton

Using the Internet is fun, but worrisome, especially if you surf far and wide over the Veb! There is a very real risk of ownloading a virus, and of hackers reaching your privacy and gaining ccess to your computer. And with so nuch dubious material out there, there s a good chance of your children or co-vorkers being exposed to unsuitable natter at some stage. Norton Internet ecurity 2000 (NIS) aims to minimise hese risks while still allowing users to njoy the advantages of the Internet.

imed at home and small business sers, NIS supports multiple user ccounts with varying access levels. There are four account templates - hild, Teen, Adult and Supervisor - vith sliders to set pre-defined levels of ecurity and privacy. The trade-off with igher levels of protection is that users ncounter more frequent NIS blocks nd alerts. Advanced users can tweak NIS on the fly, but restricted users are imply barred from disallowed sites and ffered no opportunity to tamper with NIS's settings. You can minimise the isk of users bypassing NIS controls by etting a restricted account as the lefault logon account, and ensuring hat users logoff from their account at he end of a session. A detailed series of event logs and reports makes it possible to review usage after the event. Integrated into NIS is a full copy of Norton AntiVirus 2000, with a year's free updates via the built-in LiveUpdate — to both programs.

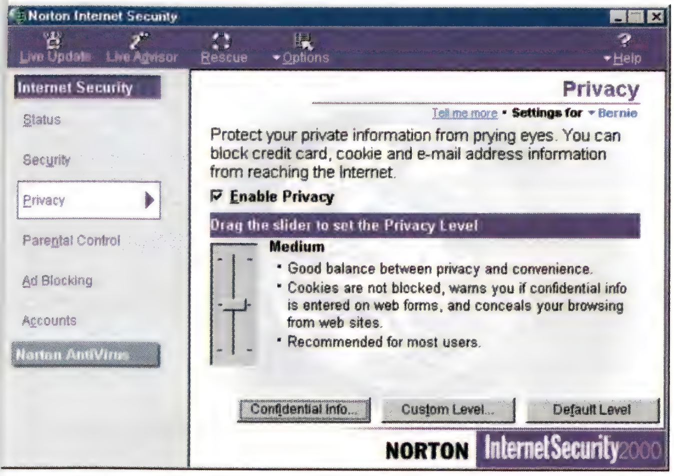
NIS offers protection in four areas:

Security

NIS prevents unauthorised access to your computer and blocks attempts to access personal information. It sets up a firewall, comprising a set of rules specifying what is permitted through the firewall and what is not. If it encounters a violation or a situation for which there is no rule (e.g. an unknown application trying to establish an Internet connection), it pops up an alert offering you a choice of options to deal with the situation (if you're a restricted user, it just sets up a block). Wizards step you through the process of creating new rules if necessary, but advanced users can reconfigure or create them directly. Site-specific or domain-specific rules for Java applets and ActiveX controls are possible, with all downloads scanned for malicious code.

Privacy

NIS prevents personal information from being sent out through your ***browser***. It is still possible to send personal information out through other applications. You can suppress your e-mail address, home address and credit card details, among other things. One thing I particularly like about this feature is that it can suppress your details without knowing what they are. You can enter a partial address or part of your credit card number, for example. NIS can also block cookies and stop your browser passing on information, such as which Web site you last visited.



Settings for Bernie

Protect your private information from prying eyes. You can block credit card, cookie and e-mail address information from reaching the Internet.

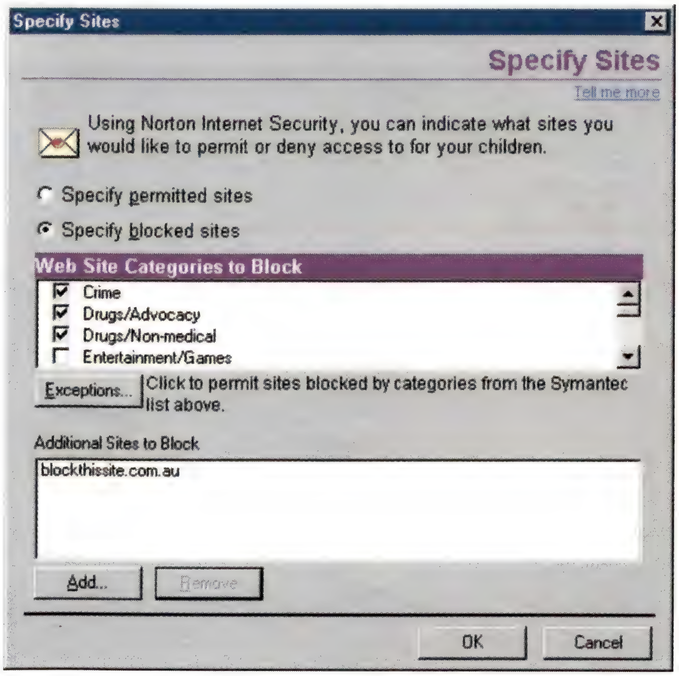
☑ **Enable Privacy**

Drag the slider to set the Privacy Level

Medium

- Good balance between privacy and convenience.
- Cookies are not blocked, warns you if confidential info is entered on web forms, and conceals your browsing from web sites.
- Recommended for most users.

Figure 1. Customising NIS.



Using Norton Internet Security, you can indicate what sites you would like to permit or deny access to for your children.

○ Specify permitted sites

● Specify blocked sites

Web Site Categories to Block

☑ Crime
☑ Drugs/Advocacy
☑ Drugs/Non-medical
☐ Entertainment/Games

Click to permit sites blocked by categories from the Symantec list above.

Additional Sites to Block

blockthissite.com.au

Figure 2. Blocking access to Web site categories.

Parental Control

NIS offers two means of censorship:

- *Application*, in which you nominate the applications with which users may connect to the Internet. For instance, you might permit e-mail and browsers, but block chat and newsgroups.
- *Site*, in which you block access to dubious Web sites. You can nominate which sites to block or, alternatively, choose to block sites which fall into specific categories, e.g. Sex, Crime, Violence. Symantec maintains the site category list with user input, and LiveUpdate downloads the most recent list each time it runs. You can customise the Site list by permitting exceptions, and nominating additional sites or domains to block.

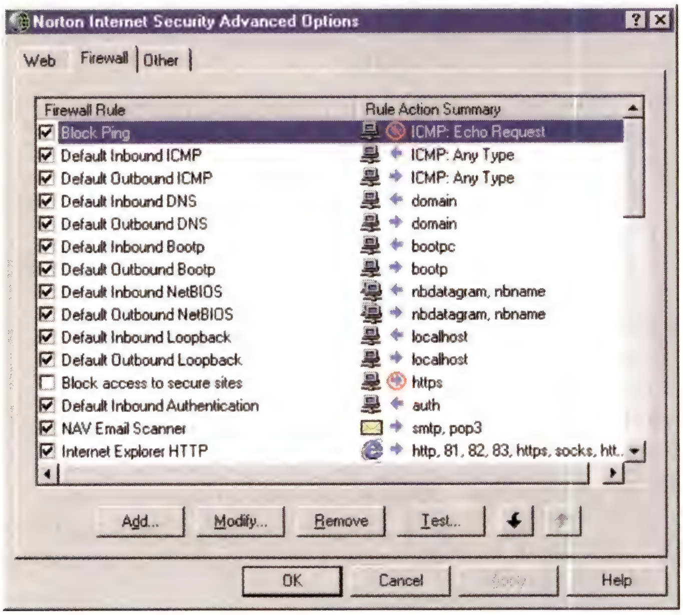
Ad blocking

If you choose to enable this option, NIS blocks many graphic ads and popup windows. A nice side-effect is that it results in faster page downloading.

Assessment

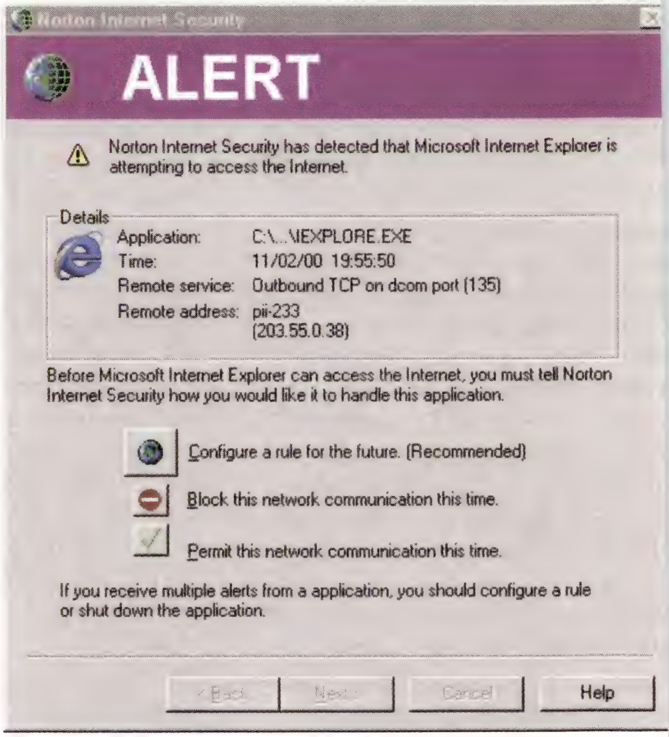
NIS doesn't offer totally fail-safe Internet protection — but, to be fair, nor does any other Internet security product I've seen thus far. It kicks in at the point of Internet connection — so won't stop your children from running applications, viewing cached Web pages or writing e-mail messages and queuing them for sending by someone else. You'll need to make an effort to cultivate good Internet habits and ensure others do too — logging off from NIS, for instance, so young children don't inadvertently access someone else's account; clearing your browser's cache and monitoring your mailbox.

If you're blocking specific categories of Web sites, there remains a risk of users



Firewall Rule	Rule Action Summary
☑ Block Ping	ICMP: Echo Request
☑ Default Inbound ICMP	ICMP: Any Type
☑ Default Outbound ICMP	ICMP: Any Type
☑ Default Inbound DNS	domain
☑ Default Outbound DNS	domain
☑ Default Inbound Bootp	bootpc
☑ Default Outbound Bootp	bootp
☑ Default Inbound NetBIOS	nbdatagram, nbname
☑ Default Outbound NetBIOS	nbdatagram, nbname
☑ Default Inbound Loopback	localhost
☑ Default Outbound Loopback	localhost
☐ Block access to secure sites	https
☑ Default Inbound Authentication	auth
☑ NAV Email Scanner	smtp, pop3
☑ Internet Explorer HTTP	http, 81, 82, 83, https, socks, htt..

Figure 3. Creating firewall rules.



Norton Internet Security has detected that Microsoft Internet Explorer is attempting to access the Internet.

Details

Application: C:\...\IEXPLORE.EXE
Time: 11/02/00 19:55:50
Remote service: Outbound TCP on dcom port (135)
Remote address: pii-233
(203.55.0.38)

Before Microsoft Internet Explorer can access the Internet, you must tell Norton Internet Security how you would like it to handle this application.

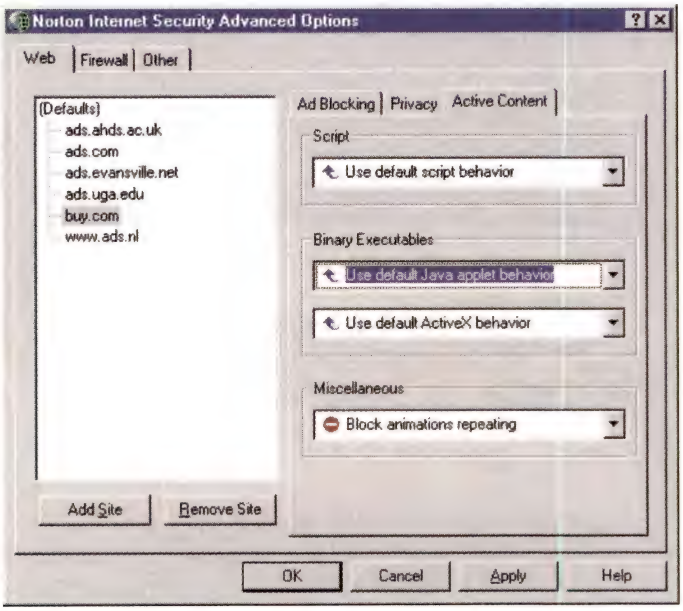
Configure a rule for the future. (Recommended)

Block this network communication this time.

Permit this network communication this time.

If you receive multiple alerts from a application, you should configure a rule or shut down the application.

Figure 4. A firewall alert



(Defaults)
ads.ahds.ac.uk
ads.com
ads.evansville.net
ads.uga.edu
buy.com
www.ads.nl

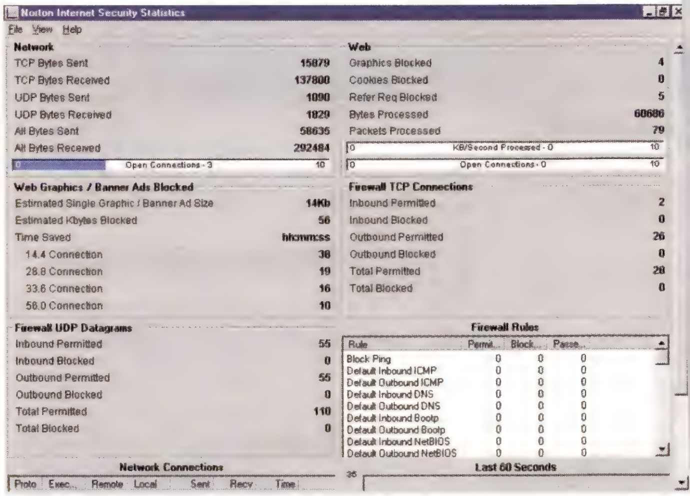
Script: Use default script behavior

Binary Executables: Use default Java applet behavior

Use default ActiveX behavior

Miscellaneous: Block animations repeating

Figure 5. Setting firewall rules for specific Web sites.



Network	
TCP Bytes Sent	15879
TCP Bytes Received	137800
UDP Bytes Sent	1090
UDP Bytes Received	1829
All Bytes Sent	58635
All Bytes Received	292484

Web	
Graphics Blocked	4
Cookies Blocked	0
Refer Req Blocked	5
Bytes Processed	60686
Packets Processed	79

Web Graphics / Banner Ads Blocked	
Estimated Single Graphic / Banner Ad Size	14Kb
Estimated Kbytes Blocked	56
Time Saved	hh:mm:ss
14.4 Connection	38
28.8 Connection	19
33.6 Connection	16
56.0 Connection	10

Firewall TCP Connections	
Inbound Permitted	2
Inbound Blocked	0
Outbound Permitted	26
Outbound Blocked	0
Total Permitted	28
Total Blocked	0

Firewall UDP Datagrams	
Inbound Permitted	55
Inbound Blocked	0
Outbound Permitted	55
Outbound Blocked	0
Total Permitted	110
Total Blocked	0

Firewall Rules

Rule	Permit...	Block...	Passe...
Block Ping	0	0	0
Default Inbound ICMP	0	0	0
Default Outbound ICMP	0	0	0
Default Inbound DNS	0	0	0
Default Outbound DNS	0	0	0
Default Inbound Bootp	0	0	0
Default Outbound Bootp	0	0	0
Default Inbound NetBIOS	0	0	0
Default Outbound NetBIOS	0	0	0

Figure 6. NIS statistics for an Internet session.

ccessing a not-yet-classified site, or nding dubious information on an therwise innocent site. NIS's ability to lock dubious information doesn't xtent to newsgroups — it's not ossible to filter newsgroups or ewsgroup messages. Nor does NIS lter mail messages. It won't prevent pam, nor will it control what nformation your children or colleagues nay be disclosing in messages to others. o, NIS will help you mind your arental responsibilities, but won't elieve you of them altogether.

Vhile NIS claims to be useable straight ut of the box, you'll need to check ach account's settings to ensure it rovides the control you require. NIS's lefault settings aren't particularly ecure; for instance, parental control is lisabled on all new accounts, and all ctiveX and Java applets are permitted hrough the firewall.

did encounter a minor glitch — it's ossible to access newsgroups under a lisallowed account if the news server onnection is active when you log in. Once more, the solution lies in good Internet habits — severing a news server connection when you've finished with it.

On the positive side, I wasn't able to bypass NIS controls using the most common methods while operating under a restricted account — I couldn't switch it off from the system tray or the Close Program dialog. And while it's easy enough to bypass NIS when operating in Safe mode, Internet access is normally disabled in Safe mode anyway. I don't claim it's not possible to bypass NIS, but under normal usage and with responsible parental monitoring, NIS should provide a basic level of security.

Cost and Availability

RRP $99. Owners of Norton AntiVirus, Norton SystemWorks and Norton Utilities can claim a 30% rebate. Available from your local software reseller; otherwise contact Symantec Australia ph (02) 8879 1169, *www.symantec.com.*

Minimum System Requirements

Pentium processor, Windows 95, 24 MB RAM (32 MB recommended), CD-ROM drive, 60 MB free hard disk space, Internet access. ❑

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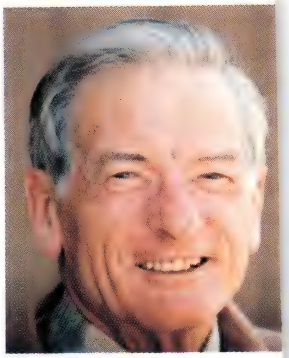
Windows Flash!

Occasional proceedings report from the Windows SIG



Bob Mayston

Internet Security

How secure is your system? So you use a virus scanner, delete unsolicited e-mails, and so on. But do you know while you surf the net other users out there may be attempting to access your system. It could be your own ISP or it might be some malicious snooper. If you want to read and know more go to Steve Gibson's page at *http://grc.com* and click on to Shields UP. Here you may download and test your machine for ease of access with a small 17 KB program named *IP_Agent*. The test takes several minutes and checks your ports and shields then issues a report with a reminder, that which a hacker may not be able to do today, he might tomorrow! Probably the most common weakness is a port left open after downloading. Cautious users may consider closing their browser after downloading then reopening or leaving downloads until last then closing immediately thereafter.

If on testing you feel the need of a personal firewall, then go to *http://www.zonelabs.com* and look at *Zone Alarm*. However be warned despite the glowing blurb on the site it is still very much a "site under construction" as indicated in the Steve Gibson review of it, found on his home page above. You may vary the degree of protection to suit your requirements. While it blocks access from outside, it can list the URL of the site trying to access your machine. Armed with this information you can then log into the site and see just who is being so nosey. Keep your eye on this site and when the bugs are removed this program could well be a winner for the personal user.

The above concerns invasion of your machine from outside, but what if you invite invasion from within! Enter "Advertiser sponsored software". Here by downloading and using such sponsored software you agree to allow your machine to establish itself as a server and invite advertisements from outside by "phoning back home" while you unwittingly surf the net. That is why such software is either "freeware" or comes at a low price. All this because we don't read the small print on the licence agreement, which should contain a statement that such software was co-installed with the program in question. The trade name for this software is *Aureate*, but since it attracted a lot of attention, they have renamed it *Radiate*. To read more about the traps and realities of this, look again at Steve Gibson's page *http://grc.com* and click on "Aureate Media Corporation Controversy". Here you will find a list of programs that have the Aureate software imbedded in them including such favourites as CuteFTP and MP3 album finder.

Note in Particular

- No indication that the software would also install the *Aureate* advertising system.
- The Aureate system runs and communicates in complete secrecy.
- It establishes a server on the user's machine.
- It survives removal of the host program and continues thereafter.

As you will see Gibson has written a free detection program "Optout" so you may determine its presence and remove Aureate and several others reportedly about to hit the market.

Meantime help has also ironically come from an unexpected source.- Cokebottle a rather well known "crack site *http://www.download.com@ 3253986333/dload/antispy.zip* (I had difficulty accessing the site). Here you will find a relatively small file named *AntiSpy.exe*. This not only details the files implanted by *Aureate*, but also offers to remove them and so is an alternate to the Gibson program referred to above. The Readme file further explains the key file to watch for and remove from the registry is Advert.dll, as without this the "spyware cannot operate. The Readme file also provides a list of software harbouring the *Aureate* "spyware". In comparing th two removal programs, the Gibson product names fewer offending attache files than the *Antispy* program, but both seem to clear the necessary offending material.

All this is by way of introducing the particular software for review namely ***Go! Zilla*** because it is launched under the *Aureate Media* banner. It is offered as a free "Advertiser Sponsored " version 3.5 (www.gizmo.net) or as a paid registered version that claims ***not*** to bring up the advertiser banners. But does the *Aureate* system lie lurking in the background of the registered version? I have checked it over with *AntiSpy* and found three offending files but not the critical Advert.dll. So far I have not removed them and *at the time o writing* I am not aware of any un-toward experiences. Time will tell.

GO! Zilla

GoZilla is an elegant downloading program bustling with features including the following :-

- Resume downloads after interruption from where it left off, however the downloading site must support resume-downloading concept.

Voice-Over-Net

The Real Thing

by Major Keary

Recently I had the opportunity to visit GlobalCenter's facility in South Melbourne; it is where the Australian Netscape and Yahoo servers are located, along with those of some very large corporations. Quite a few ISPs are located there, as well as users who have taken minimum rack space. Apart from security, connection to the high speed link is a significant attraction.

GlobalCenter is part of the Global Crossing Company, which has in the order of 160,000 km of fibre optic cable. Amongst their assets are five cable-laying ships.

By having such an extensive and meshed network, GlobalCenter clients are able to take full advantage of voice-over-net because their traffic can be confined to a dedicated link, thus avoiding the problem of late and lost packets.

The Melbourne facility is primarily a data centre for commercial services, even though it hosts some significant (and some less significant) non-commercial servers. The building has been set up specifically for the purpose. I have some experience of secure installations and this rates amongst the best. Clients can remotely power-down their servers and restart them, and have 24-hour access (strictly controlled) for maintenance. All equipment is connected to a central control suite where it is monitored in order that problems are detected, and rectified, quickly.

Climate control, fire control systems, and UPS are state of the art. If the battery-power system is stretched too far a generator, which can keep all systems alive for days, can be brought online. Quite an eye-opener.

- Can simultaneously download up to five files.
- Searches for fastest site if file has multiple site availability.
- Offers to use your installed virus scanner to check download.
- Able to schedule download time to most suitable for your server.
- Auto shutdown of both program and your machine on completion of download. (Your machine must support auto power off)
- Has auto update feature for selected files.

fter installation it is necessary to look n options and set the various arameters to suit your tastes and nachine settings. This achieved you are resented with choices of operation.

1) drag file names and address into the lownload screen for later downloading r,

2) set the Gozilla Icon to reside on the lesktop and when you want to download a file drag it into the Gozilla Icon. The machine screams at you and marks the download, or

3) you may integrate the browser with Gozilla so any time you click on a file it is marked for download automatically. Marked files are later downloaded at leisure.

Files may be placed in categories eg. *Images* that might contain all files with extensions like GIF, JPEG etc. In addition files may be sorted by several parameters.

As Melbourne PC offers extended times in the early hours of the day, you may designate a large file for downloading then set the Scheduler to start at (say) 2.00 am and continue either until time is expired or the download complete. In the latter instance if your machine has auto power off Gozilla will also power the machine down.

In the case of extremely long files or slow modems where you cannot download the entire file in one go, then provided the host site allows resumed download you may log in again next day and resume where you left off. The same applies if you lose a connection within an allocated time slot. This is a most valuable feature in these days of lengthy files and large hard disks.

A further unusual feature is the ability to simultaneously download several (*practical upper limit 3*) files. While I personally prefer to do one thing at a time, this feature is handy to utilize full bandwidth when downloading two or three files from sites of differing speed.

Where you have a regular program in use that is regularly updated, then you may add this to an update box so Gozilla will regularly check if an update is available for download.

Another feature is the *"Leech files"* command where it visits and lists all files on the site. You may then select those of interest either for immediate or later download.

In cases where there are multiple sites all having the same required file, then Gozilla will search for the fastest or most stable site and switch the download to there.

This brief review has outlined the various options and tricks available to facilitate the reliable download of files from the net. It is an easy to use program and should find a useful place among your favourite software, but beware of the *Aureate* now *Radiant* "spyware' likely to be present.

My thanks to Charles Knox and Kugvic News for site addresses mentioned under security matters.

SIG Meeting Reports

Access SIG

Report by Craig Evans

Greetings experienced programmers, newcomers, those in between.

At our last meeting we discussed:

- How to make the cursor automatically move to different fields based on what is typed into a field.
- How to automatically access objects and code in other databases.
- Working with Null and Zero length strings in Text fields and the difference between them.
- Using Functions as criteria in Queries.
- Different aspects of Table design.
- How to stop routine Microsoft Access warning messages.

For more solutions and amazing discoveries drop in to the Access SIG. All problems readily accepted. If you are not completely satisfied with our solutions we will happily return your problems with a smile and no questions asked.You will benefit most if you are currently working on a database — but don't let that deter you from coming along. Bring your database with you and we'll probably fix it on the spot. Remember, all the solutions are simple — some just take longer to figure out.

Daytime

Report by Don Buchanan

March Meeting; yet another near full house, including two new members added to our e-mail list. We started with a Q&A session where the following issues were discussed.

- Defragmentation
- A new Trojan
- Power Management
- Installation of Windows 98 SE over the top of Windows 98
- Mail attachment downloads in Outlook Express and Eudora
- Mailbox size limits by ISPs
- Microsoft Wintop
- Trail Blazer

We were most grateful for the time and information provided by our Quicken presenter Viv Martin. Quicken being primarily a bookkeeping application for home use, whilst Quickbooks is the program designed for business. Quicken version 7 includes investment features that were briefly demonstrated. Viv suggested that it was better to contain all shares in the one investment account and that this version easily handles dividend re-investment,franked dividends and capital gains. Also that share prices are currently available free via a server based in the USA. Following is a summary of other points Viv mentioned.

An account includes balance sheet items ie. a list of transactions in a single current account.

When creating a Quicken file Viv suggested removing all ticks from categories. Classes are either incoming or outgoing. Quicken takes the Date format from Windows and works best if the date separator "/" is selected. Refer control panel, regional settings, date. Excess or profit is automatically added to equity. A demonstration of profit/loss and balance sheet was displayed.

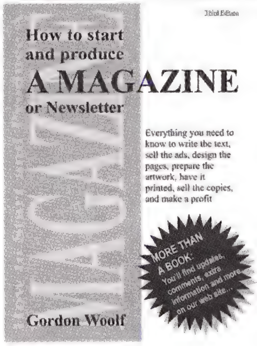
Quicken is a double entry system, contains a memorised transaction list, and has a handy split-transaction window. Much interest was shown in the cash register .wav file. Our appreciation to Viv for his involvement in a very successful and useful morning.

May. Come along to see Kelvin Cording present a demonstration of a CD writer, including how to make useful CD back-ups instead of drink coasters. See you there.

EAST

Report by Frank Walsh

Meeting 14 March. The early part of the meeting included Beginner's Corner, Tips and Tricks, Shareware and a Local Government Adventure.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MAGAZINE
Gordon Woolf

COMING SOON:

We keep getting asked, so for many it will be good news that the Third Edition of How to Start and Produce a Magazine is nearly ready. It will be published in May and you can reserve your copy now — there is a special price for Melb PC members and an even better price for those who bought the previous edition. Price $35 ($38.50 after GST!) but for members before June just $31. Send no money now — we'll send an invoice when it is ready.

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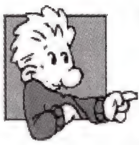

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lynn@melbpc.org.au www.sustance.com/pollock

ne of our members, Roy Sudholz, esented an introduction to Caldera penLinux V2.3, an alternative to the ual Microsoft platforms. This version Linux is available for about A$60.00. he option of downloading from the ternet is not recommended. stallation is straight forward but tention to detail is most important and yone considering Linux for the first me could benefit from the assistance someone who has already successfully stalled this operating system. Once aded, the Caldera version of Linux rovides over sixty different programs, me similar to the well-known indows programs, some entirely new.

inux has proven to be exceptionally able, reliable, and virtually trouble free. he disadvantages include its inability to un some Windows programs [rapidly anging] and the requirement of its wn dedicated partition on your hard isk. Generally speaking about 1.5 GB f hard disk would be sufficient in the itial stages but it can scale down to run n less. Caldera Linux comes with a inux version of Partition Magic and oot Magic which will create a Dual oot System allowing you to enjoy the est of both Linux and Windows. nother option is the installation of a emovable hard drive drawer.

ast Beginners Group

arch meeting report by Gary Taylor

eginners also means New Users. eginners in scanning, Office, CD urning, Excel, any subject. Everyone is velcome. The Melb PC Special Interest roup home pages have many useful inks. If Windows 98 annoys you with he often silly programs that seem to take ver your computer, try Windows 98 nnoyances at *http://www.annoyances.org/ vin98/* and learn how to get rid of nwanted components. Also try Steve ibson's Homepage: *http://grc.com/* This ells about silent intruders invading your ystem while you are surfing the Web. s usual we have demonstrations of opy, paste, import, insert using Word nd everyone would have learnt omething on the day.

East Workshop

March meeting report by Gary Taylor.

The main problems sorted out related to modems and Internet access/connection. There is little help provided by most Internet Service providers (ISPs) and the wizards that are part of the Internet browsing software are too confusing for many users. Eudora is still a popular program for e-mail but its finer points leave many in the dark. A crashing Win98 system was tamed and the operating system reloaded. This all takes a lot of time and patience, but is becoming a frequent task for many users, as is having to defragment one's hard drives. One member bravely allowed all "backup" information to be copied from the single hard drive on to a Zip disk, but sheepishly changed his mind and left his overfilled system as it was — "wife had to be consulted first!"

Three sound card queries were resolved, one negatively. The latter was because the expensive new sound card was found to be incompatible with the four year old motherboard. We expect to have a special Internet session at the May workshop.

Genealogy SIG

Report by Bruno Dik

The March meeting saw one keen member using the 1881 British Census CD ROMs from 10.00 am whilst the Beginners Group was under way. The Genealogy Group spent several hours browsing the enormous amount of information available on the Internet. A superior search engine was used: the new version by "google.com" Try it and see how quickly and thoroughly it responds: *http://directory.google.com* Genealogical buffs go to: *http://directory.google.com/Top/Society/Genealogy/* Note the capitals — they are necessary.

The Genealogy Expo 8 April at the World Vision Centre will be one of the topics of our next report. Contact Bruno Dik, Tel:9733 4585, or e-mail *bruno_dik@yahoo.com.au*

Nonlinear Video Editing

Report by Lawrie Weston

The Nonlinear video editing SIG continues with good attendances. However, all Melb PC members who are interested are welcome to come and have a look. Recently we have been looking at the latest version of Media Studio Pro as well as Adobe Premiere.

Brad Morton of New Magic will be our visiting speaker at the May meeting. He will be demonstrating their latest products, which will include the RT2000 MPEG card. This product has raised considerable interest due to the quality of the video while it has relatively very small files.

Digital Video continues to grow, so there will be a lot of interest in their latest DV card. Brad is extremely well informed on the topic and is usually bombarded with a variety of questions.

The topic for the June meeting will be "Creating Video CDs". There will also be a "Premiere Tricks and Effects" segment after the supper break. Members' videos are also welcome.

Programming SIG

Report by Ross Hall

Our March meeting continued the graphics theme from the prior month.

Tobias Cohen gave a demonstration of a simple game using Direct-X for the graphics. The game showed the use of sprites and also 3D constructions for the background. Michael McQueen provided a list of some inconsistencies that he has discovered whilst using the Microsoft Foundation Classes. These were to do with such areas as field focus in dialog boxes and the placement of toolbars. The general feeling was that the design criteria tended towards typists and not mouse operators. The graphics kept coming where I have been refining my own simulation to try and give a realistic representation of an elastic surface. By adjusting some parameters we did get a wave motion to move across the surface. I didn't even realise that this was possible but someone suggested we try it and it worked. A typical advantage of a SIG meeting, ideas and criticisms that you wouldn't even normally consider. The meeting closed at about 10:30 pm.

Our next meeting will be on Tuesday 9 May at 7.30 pm. Hope to see you there.

Quicken

Report by Bob Mayston

Another bumper turn out of 43 members and the unexpected pleasure to again welcome several members of the Intuit team. This was most timely as we were updated with current developments to both Quicken and Quickbooks.

The first GST edition of Quickbooks in the form of Version 7 is now being distributed. We can expect this to be updated again in May and a final version in July when hopefully there will be resolution of Government vacillation on this vexing subject.

The news is if you need GST tracking and prepared data to complete the Business Activity Statement you need Quickbooks. Quicken users, will on present indications only be able to partially prepare data for the BAS.

Attention was next directed to correct use and etiquette of the Listbot e-mail system. This is to encourage members to discuss problems and observations for our mutual benefit.

The first demonstration/Tutorial given by Viv Martin demonstrated Paper Clip. This enables you to scan a document and with memo field reference it within Quicken. The scan file is acceptable as documentary proof to the Tax Office under their ruling TR9721.

After the break we took the first look at Quickbooks V7. This appears very similar to V6 but includes online banking and of course the first appearance of GST tracking. In particular the invoice module will bear the greatest difference from earlier versions. As time was limited expect to see more of this and further GST issues for discussion at our next meeting on Thursday 27 April at 7.00 pm in the SIG rooms at Dorcas Street.

Retired and Interested Persons

Report by Bill Cooney

There were signs of some "mergers and takeovers" surfacing in the ranks of our group, at the March meeting, among the conveners of the many sub groups that meet just before or after the main gathering. When there are about 120 people eager to satisfy or take part in the particular activities which interest them, it is easy to understand a need for space to accommodate them. There is also a certain overlap of topics which must occur in such a widely diverse subject as computing, so amalgamations may not be a bad idea at that. Henk Vischer has started up a beginners group, mainly centred around Windows, and he also runs a Win98 group after the meeting. The New Users, who have a smattering of knowledge and tend to explore a bit further into the known and unknown traps and tricks of the game, are looking for a quieter space in which to assemble. Perhaps that's why they are making overtures to the Database group who have widened their interests and who have such a room to use. The basic message here is that the Rippers are a very active and still growing group of enthusiastic, mature age people with a very wide ranging thirst for knowledge which is being well catered for within the groups.

Leigh Hawke has come up with the clever idea of converting back issues of our newsletter into .PDF files which he then copies to floppies (a little bit of alliteration there...), for either archiving or access by members who may want them. *"Smart fella, Leigh!"*

George Skarbek, one of our more sought after members was the guest speaker for the March meeting. He outlined a very quick and simple means of backing up data by using xcopy in a batch file, accessed via a desktop Icon. In the demonstrating of this pearl it became very clear why he is in such demand as consultant and writer on computing matters. Where you or I would be floored by some unexpected development in such an exercise, George immediately knew what had happened and why, smoothly corrected the glitch and moved serenely on. Beauty, George!

It was good to see John Gilfedder back with us and the redoubtable Max. Good luck to Alan and the other absent people of our club. Our May meeting will feature Graham Dalholme talking about a program that can assist in the management of investments and the like. No it doesn't cover such areas as advice or trading so it's not the illegal kind. Should be of interest to anyone involved in that field.

Video Editing General

Report by Albert Vanzet

If mobile telephones are the fad of the "naughties", camcorders cannot be too far behind. While the conversations on those telephones disappear into space, those videotapes of holidays, travels, family celebrations and other importan events usually gather dust in drawers an boxes. Usually they are only screened twice. The first time they are watched b the camcorder owner and his or her partner often surrounded by those who appear in the recordings. The second time they are imposed on friends or relations who often have to suffer image that zoom from one pan to another.

When we started our Video Editing SIG we stated that our aim was to assist our fellow members who wanted more than having stacks of videotapes to convert those recording into entertaining and informative productions.

With the growing popularity and the advanced technology that is put into ou camcorders those videographers want more than just images. They want to produce videos that they can show with pride and with the confidence that they and their visitors will enjoy the recordings of those important family events, holidays and travels. Maybe that is why our Video Editing General SIG has become so popular that we have outgrown our usual meeting room and soon will move to the Main Hall at the same address.

At the March meeting we screened five edited videos of Robert Dorin's clarinet performance. The productions ranged from simple edited images that showed the Robert playing the clarinet with video inserts of the audience to a send-up of the event with the title "Taking the Mickey".

Although we had announced earlier that there would be no meeting in April, afte negotiations with the venue management we were able to secure the venue for the 3rd Monday, 17 April. We promised a workshop meeting where we would try to create a video from master recording to finished production including background music and narration. A good opportunity to try out our new computer.

At our May meeting we will follow our usual program before the break including "The Art of Video" and "Computer Bits" and during the second half hope to show some new techniques using different software and present a new video editing program.

eports in *PC Update* generally appear ter our monthly meeting, so it is not ways possible to announce our ntended programs. To ensure that our embers receive sufficient advance otice of coming events we e-mail our gular SIG members one week before e meeting. If your e-mail address is not t on our SIG's listing, please inform e SIG convener *video-sig@melbpc.org.au*

VASINT

eport by Richard Solly

he March meeting was well attended y an enthusiastic group of members ager to extend their knowledge of nline Internet retail banking. The eeting commenced with a question nd answer session on general WASINT nterests. Presentations commenced with ichard Solly discussing Internet ecurity relevant to online Banking. With he Commonwealth Bank adopting a Veb browser based online bank shortly efore the March meeting, all Australian nline retail Banks are now probably Veb browser based.

nline Internet Bank access is via secure Veb servers for all known Australian ccounts. It was demonstrated that the ecure servers "turn on" the 128-bit ncryption in-built in the recent nternational versions of Netscape and nternet Explorer, even though 40 bit ncryption is the standard mode of nteraction for the browsers. With the ecent variation in US export laws for ncrypted software, it is now possible to pgrade both Netscape and Internet Explorer to permanent 128-bit ncryption. This allows extremely high evel security with all supporting secure Web servers, included that at *https://wss.melbpc.org.au/*, which hosts the User Group secure subscription form. The use of 128-bit encryption means that your data is extremely secure even if captured during Internet transmission.

Geoff Roach used the excellent Westpac online banking tutorial at *http://www.westpac.com.au* to illustrate his own experience with the Westpac service. It was shown how details of all transactions is subscribed accounts could be listed over selected periods from 1 to 6 months. Funds could be transferred from one listed account to another either immediately or at a nominated future time. Bills could be paid for companies having a Bank nominated BPay (Bill Pay) number. For those who like getting formal paper by post, accounts statements or a new cheque books could be ordered. It was pointed out that the browser screen did not have the normal control icons, especially the back button. This is to allow the server to maintain the identity of the connected account. However as we all know, Internet connections are sometimes lost, and adjustable timeout assumes the user has logged out if there is now activity within the timeout period (generally five or ten minutes by default). Geoff had not experienced any problems in using the Westpac online Banking service, although at times it was a little slow during the day.

The Commonwealth Bank site at *http://www.commbank.com.au* was used by Richard Solly in his discussion of the Banks online service. Although the visual screens are very different from those of Westpac, the services are very similar. All transactions in subscribed accounts could be listed and saved to test, comma separated value (*csv*) or Quicken file format. Funds could be transferred between accounts and bills paid to companies holding BPay numbers. No problems were reported from those at the meeting of Commonwealth Bank online banking services. Following a break for a well earned coffee and biscuit and chat with individual members, Doug Wescott demonstrated his wide ranging experience with ANZ online banking *http://www.anz.com.au*. It was shown how the general services were very similar to those of Westpac and the Commonwealth Bank, but the screens had the appearance of being "less cluttered" than those demonstrated for the previous two banks. There was increased flexibility in the choice to time that previous account transactions could be listed. Transaction details could again be saved as text, csv or Quicken compatible files. Doug also demonstrated how he managed his share trading accounts through the ANZ Internet Banking. Other services were similar to the that demonstrated for the Commonwealth and Westpac banks. Statement, cheque and deposit book ordering are available. The ANZ also offered the opportunity to send Web based e-mail inquiries to the Bank with 128-bit browser encryption. Very recently, its range of Internet Banking options has been extended. It is now possible to search for specific transactions and shortly (as at 2nd April) the ability to transfer funds to external nominated bank account is to be introduced.

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The WASINT SIG has commenced Workshop evenings for interaction between its members. Initially, the prime activity is being directly towards virtual share trading. This allows members to investigate and use the many Internet tools and to engage in share trading techniques in group collaboration. Workshops are held on the 2nd Monday in the top floor Dorcas Street SIG rooms. All Melb PC members are welcome to participate in the these sessions. Price statistics of all stock being traded on the Australian stock exchange are also available by daily e-mail. Please join the WASINT-SIG mailing list for further information of these activities. The next Workshop evening will be on Monday 8 May and the next formal SIG meeting on Thursday 18 May, when the topic will be Internet financial data resources.

WASINT SIG Web page:
http://www.melbpc.org.au/sig/WASINT/

WASINT SIG Web Data Resources:
http://www.melbpc.org.au/sig/WASINT/data/

To join WASINT SIG mailing list — send an e-mail to:
WASINT-L-Request@melbpc.org.au
with a Subject: subscribe

Windows

Report by Bob Mayston.

The combination of Windows and the Internet is a surefire recipe for a good attendance and our April meeting was no exception with over 50 members including one new visitor in attendance.

As usual Lynn Pollock lead the meeting starting with the ever popular questions and answers. Questions ranged from running two modems on one machine to removal of the "My Documents" from the desktop. Other problems were difficulties with CD players being confused when CDs are interchanged and loss of image quality when saving JPEG images.

The main topic of the Internet started with a suggestion for those who upgraded from Internet Explorer V4 to V5. Using the Find command will discover old V4 files with the extension *.MBX and *.IDX left behind and no longer of use — delete them and recover disk space. Attention was then directed to the modem connections from the Control Panel to confirm whether the updated drivers were installed and full speed potential realized. Also visit and check the advanced settings in Internet Explorer and make sure the "Never dial Connection" box is ticked" to stop aut dial from actioning. In short adopt connections in Browsers that

let you take command and not what th programmers think you need.

After the break Bob Mayston gave a demonstration of several programs to check, detect and remove security leak during a Web connection. In particular attention to the new forms of surreptitious data collection generally known as Spyware. This then lead to a demonstration of GoZilla an elegant Internet file download utility, bustling with features to make easier the downloading of lengthy files in particular. See the separate article on page 42 of this issue for additional detail.

Topics and themes for future meetings are:

Month	May	June
Topic	Modems	Access
Theme	Networks	DVD ❑

TRAINING INFORMATION BOX

Where Are Courses Held?

At the Group's premises, usually in the Training Room, but check when you arrive.

The address is:

27 Dorcas Street,
(Cnr. Wells Street),
South Melbourne
VIC 3205

How Do I Get There?

Usually plenty of parking is available nearby in the evenings and on weekends, or catch a tram to the corner of St. Kilda Road and Dorcas Street. After hours entrance is through the car park at the rear of the building.

Important!

You will obtain greater benefit from a course if you have the skills recommended by Trainers as prerequisites for their courses. Otherwise, you may not be able to keep up with the class practical sessions.

How Do I Book A Course?

Please use the order form in this magazine or (for credit cards only) phone or fax the office on 9699 6222 during business hours.

Early enrolment is advised as places are limited. Enrolments/bookings without payment will **not** be accepted.

I Have Something To Say!

You can contact Training with suggestions for courses or other training related matters by sending an e-mail to Ian Rankin at irankin@melbpc.org.au

Do You Run Courses Upon Request?

Some courses are available upon request but are subject to minimum numbers. Please contact the Office for details.

Training Schedule — May and June 2000

Ian Rankin, Training Coordinator

pplication Courses

Quicken for Small Business $240

iv Martin
our 3-hour sessions
30 pm – 9.30 pm
Monday 8, 15, 22, 29 May.

ookkeeping, record keeping, roducing reports for accountants Using Quicken or Quicken for usiness.

rerequisites: Basic Windows experience assumed. Ideally, ownership of the latest ustralianised version of Quicken for Windows.

Introduction to PowerPoint $87

Caroline Houston
.30 pm – 9.30 pm
Thursday 4 May.

This course gives an introduction o the capability of the tools, using he templates and wizards, reating graphics and creating tandard slides. Students will reate presentations that can be iven as on-screen shows or rinted for use on an overhead rojector. This course is a must in reparation for your next meeting/ onference delivery.

Prerequisites: Familiarity with Windows 95 including mouse and keyboard skills.

Intermediate PowerPoint $87

Caroline Houston
6.30 pm – 9.30 pm
Tuesday 13 June.

This course gives a more in-depth perspective to creating presentations using enhanced graphics and special transformations from slide to slide. Students will create presentations that can be given as on-screen shows or printed for use on an overhead projector. This course is a must in preparation for your next meeting/conference delivery.

Prerequisites: Familiarity with Win 95 including mouse and keyboard skills. This course also assumes familiarity with PowerPoint in creating basic slides and basic graphics or attendance at the Introduction course.

XL 8/97 — Introduction $287.00

Peter Harvest
6.30 pm – 9.30 pm
Wednesday 10, 17, 24 May

On completion of this course you will have the basic knowledge and effective skills to create your own spreadsheets in Microsoft Excel 8/ 97. Techniques such as entering data and developing formulae using Excel's many built-in functions and making charts, printing and saving your files and using Excel's extensive online Help are all covered.

Prerequisites: No prior knowledge of spreadsheets is required. Participants must already know how to use Win 95 or Windows NT.

Advanced Access 8/97 $207

Peter Fallon
6.30 pm - 9.30 pm
Tuesday 2, 9, 16 May.

This hands-on course is designed to build on a good knowledge of the product and teach you to how to perform many complex and advanced database operations and solve technical problems. Create complex queries, and look at how the query engine actually works. Build complex forms and reports, and create Macros and Visual basic for Application modules to automate them into a single application. Discuss and understand the limitations of Access.

Prerequisites: A very solid knowledge of Access 97 is required or attendance at the Intermediate Access 97 course.

Introduction to Microsoft Word $81

Jane Morland
6.30 pm - 9.30 pm
Wednesday 31 May

This hands-on course will give a basic grounding in Word — an essential for new starters in word processing. Designed for complete novices and those who feel that they may benefit from short formal course.

Prerequisites: Familiarity with the Windows environment including mouse and keyboard skills at a basic level.

Using Microsoft Word $87

Jane Morland
6.30 pm – 9.30 pm
Thursday 8 June.

On the completion of this course students will be able to set and use tabs: create and modify the appearance of a table: enter data into a table: create headers and footers: import graphics: use Word Art effectively.

Prerequisites: Familiarity with the basic functions of Word.

Internet Courses

Note: If you are starting with minimal knowledge, we suggest that the Internet courses are best attended in the sequence shown. More advanced students should attend at their skill level.

Introduction to the Internet $70

Lynn Pollock
9.00 am – 12 noon
Saturday 27 May.

An overview of the Melb PC Internet service. Live explanations of all the major programs that make up the Internet. Full detailed discussion of the hardware and software items involved, including modems. General questions concerning Internet connections.

Prerequisites: None.

See also: File management, archiving and compression techniques.

Using the Internet with Windows 95/98 $130

Lynn Pollock
9.00 am – 4.00 pm
Saturday 17 June.

This is the basic course for Windows 95/98 users. It suits people about to install Windows 95 or 98 Internet software or novice users of the Internet who want a full explanation of the basic setup and techniques involved. Hands-on individual installation of 32-bit Internet software. Explanation, discussion and live student Internet connections to demonstrate and practice all the major components.

Prerequisites: Windows 95/ 98 experience.

Advanced Internet Part 1: Effectively Using Web Browsers $90

Lynn Pollock
1.00 pm – 5.00 pm
Saturday 27 May.

Complete examination and discussion of all the features in the latest versions of both Netscape and MS Internet Explorer. Configuring, bookmark and favourite management, saving images and data, offline viewing of saved information, effective use of search engines and techniques, and tips and tricks. Students have live Internet connections to practice their searching techniques.

Prerequisites: Students should have attended the basic Internet course or have a good understanding of Internet principles. This is an advanced course.

Training Courses continued next page.

Advanced Internet Part 2: Internet Workshop $130

Lynn Pollock
9.00 am – 4.00 pm
Sunday 18 June.

Complete discussion and live student Internet connections examining all the features that make up the Internet today, with the exception of Web browsers. Students will gain experience with the following: Advanced e-mail, FTP, Archie, Gopher, Finger, Telnet, IRC Network, Internet Phone, newsgroups and list servers, also connection problems and tips and tricks.

Prerequisites: Students should have attended the basic Internet course or have a good understanding of Internet principles. This is an advanced course.

Web Page Design $200

Steven Goldate
6.30 pm – 9.30 pm
Thursday 11, 18, 25 May.
6.30 pm – 9.30 pm
Wednesday 14, 21, 28 June.

Students will learn how to write Web pages for the World Wide Web. This includes HTML (Hypertext Markup Language) basics, use of HTML editors, both text and WYSIWYG. Students will gradually be introduced into the inner workings of HTML, learning how to write simple Web pages, then progress to more complex features such as using tables, frames, embedding sound files, incorporating public domain JAVA applets, how to create online slide shows and more. The course will cover such issues as features of good Web page design, FTP uploading issues and obtaining free material from the Net. Students will also learn about directory structures in HTML and file uploading with FTP.

Prerequisites: Preferably, students should be familiar with the Internet, using a Web Browser, have some basic word editing skills and be familiar with Windows.

Operating System and Hardware Courses

How To Buy a Computer Free

Ian Rankin
10.00 am – 1.00 pm
Saturday 13 May.
6.30 pm – 9.30 pm
Tuesday 20 June.

What a computer does, what the jargon means, buying advice, tips and traps, no sales talk!

Prerequisites: None.

Hardware Upgrade and Repairs $120

Tom Coleman
10.00 am – 5.00 pm
Sunday 14 May.
6.30 pm – 9.30 pm
Thursday 15, 22 June.

Students will be able to dismantle and re-assemble a computer, replace major components. Be aware of the basic "Rules" and conventions of computer building. Know enough to get started on simple jobs.

Prerequisites: Familiarity with the basic functions of each of a computer's parts.

Hard Disk Installation $60

Tom Coleman
One 3-hour session
6.30 pm – 9.30 pm
Tuesday 6 June.

Replacing or adding another hard disk. Master/Slave setup. Installation to older computers. Cabling. Trouble shooting and diagnostics. Options and alternatives. Students will be introduced to the following:
Hard disk types.
CMOS setup.
Partitioning, formatting and optimising setup.

***Materials:** Some practical hands on hardware is provided. Students will be helped by providing their own tools (screwdrivers). The class will be inconvenienced by students bringing in their own computers for upgrading or repair. Students should bring their own pens and paper for additional notes. There will be many extra items discussed in class and some note taking may be necessary.*

Prerequisites: The course requires no more practical skill than using a screwdriver. The basics of hard disk set up and function is covered, but students with a more comprehensive knowledge of computing will get more out of this course.

Introduction to Linux $140.00

Len Krois
9.00 am - 4.00 pm
Saturday 3 June.

On completion of the course, participants will have a general feel for the processes of Linux installation, some knowledge of administration and security and an appreciation for the look and feel of the basic Linux command line interface. With this knowledge of the basic navigation and file manipulation commands as well as the on-line manual pages, participants will be well placed to explore further in the open systems arena.

Prerequisites: The course is designed for Members who are seeking basic Linux skills. Although there are no specific prerequisites, members comfortable with command line computing would benefit more.

***Materials:** The revised edition Linux pocketbook from APC, including CDs containing Red Hat & Caldera OpenLinux implementations of Linux. Notes are provided on a diskette containing some good training resources obtained from the Internet. Students should bring their own pens and paper for additional notes.*

Introduction to Windows 98 $267

Len Krois
9.00 am – 4.00 pm
Saturday, Sunday 20, 21 May.

This course is for beginners & intermediate Students. It introduces the Windows 98 environment to the computer novice. You'll get to know your computer, how to use it productively and the skills you'll need to use Microsoft Windows effectively.

Materials: A comprehensiv manual is provided and it is recommended that Students bring a pen and paper as note taking may be necessary.

Prerequisites: None. However you will have an advantage if you have had some exposure to computers and previously used a mouse.

Advanced Windows 95/98 $130

Lynn Pollock
9.00 am – 4.00 pm
Sunday 28 May.

A full and detailed examination o Windows 95 for experienced user Topics include adding hardware, registry control and editing, backu techniques, communications, networking with Win 95, conflict resolution, enhancing performanc system maintenance, and many tips and tricks.

Prerequisites: Must be familiar with Win 95.

Introduction to Network $120

Len Krois
9.00 am – 4.00 pm
Saturday 6 May.

This session will show you how t connect two or more computers so that you can share computer resources.

Prerequisites: Familiarity with Windows 3.1 or Windows 95. ❑

nternet Access Application Form

structions

lease **read** the entire form. It may be hotocopied.

Complete **every** field else it might be returned to ou. Each field has a purpose, which includes updating our database.

Enclose a cheque or authorise a charge against our credit card for the requisite amount. Send the orm with payment to

Melbourne PC User Group
PO Box 283
South Melbourne VIC 3205

escription of Service

General. The Melbourne PC User Group Inc A0003293V (Melb PC) Internet Service network (the Network) is a private telecommunications network owned and operated by Melb PC for its members. It is administered by the Internet Subcommittee (the Subcommittee) as a subscriber-funded service.

Function of the Melb PC Network. The primary function of the Network is to support the free transfer of information to and from Melb PC members, subject to the terms of our Acceptable Use Policy.

Standard Service. PPP accounts.

Features:

- Electronic Mail.
- We also provide access to other services that are found on the Internet but they are not under our control.

Charges. Annual fee $140, subject to change from time to time.

Limits and Quotas. Up to 120 minutes access per day (non-cumulative). A bank of modems is made available with a time limit of 30 minutes for the benefit of users who need to check their mail and get off quickly. The Mail quota is 4 MB. Excess mail may be deleted.

Access Software. You will need to acquire and configure suitable software from our Shareware library or other resources.

Accounts. Accounts are issued only to individuals, not company names. Melb PC may reject an application without stating a reason.

Support. Volunteers offer their help in local newsgroups, via our free Bulletin Board Service, or by telephone.

Training. Melb PC offers training courses.

Duration. The subscription to the Network is for one year from the date of acceptance. It automatically terminates upon expiry of membership of Melb PC.

Acknowledgment. Successful applicants will include individuals whose forms are correctly filled out and whose funds have been transferred to our bank account.

Net Etiquette. Melb PC endorses adherence to ("*net etiquette*" or "*netiquette*") as deemed by the subcommittee from time to time.

Internet Access Agreement

Definitions

"**Melb PC**" means The Melbourne PC User Group Incorporated A0003293V or its assignee;

"**the subscriber**" means the Melb PC member making this application;

"**family subscriber**" refers to an existing Melb PC Family Member, or a member of the family residing at the same address who applies for Melb PC Family Membership at this same time, paying the additional $10 Melb PC membership in addition to the Internet subscription;

"**Internet access**" means access to the World Wide Web, Internet e-mail and any additional Internet facilities Melb PC may offer to its members from time to time, but unless Melb PC agrees otherwise does not include supply or maintenance of the subscriber's equipment, software or telephone line, or technical support;

"**subscription period**" means the period in advance for which the subscriber has paid in full, being one of the periods of subscription offered by Melb PC from time to time;

1. The subscriber asks Melb PC to provide Internet access and Melb PC agrees to do so.

2. This agreement starts when an authorised officer of Melb PC has executed it and Melb PC has received cleared payment for the subscription period.

3. Subject to the early termination clauses of this agreement and to clause 4, this agreement continues until the end of the subscription period.

4. If Melb PC and the subscriber renew this agreement for a further subscription period, this agreement applies to the renewed subscription period unless the parties agree otherwise in writing.

5. The subscriber acknowledges that:

   a. Continuity and speed of the Internet access depends on a wide range of factors, many of which are beyond the control of Melb PC;
   b. Melb PC has no control over the accuracy or appropriateness of any information on the Internet;
   c. Melb PC is not responsible for any material available on the Internet;
   d. The subscriber's Internet access may be interrupted by equipment failure, the need for routine maintenance, peak demand and so on;
   e. Melb PC cannot guarantee that the subscriber will be able to secure access at any given time, or that fluctuations in demand by other subscribers will not prevent the subscriber from using the full amount of the maximum daily time allowance on any given day.

6. Subject to matters of the kind referred to in the previous clause and to the subscriber's access limits, Melb PC will use its best endeavours to keep Internet access available continuously and to allow the subscriber to have access for the current daily time allowance from time to time.

7. The subscriber indemnifies Melb PC against any liability, claim, action, suit, demand, loss, cost or expense arising out of or in any way connected with this agreement or Internet access, including any negligence by Melb PC, its servants or agents.

8. The subscriber will pay fees according to Melb PC's standard pricing list from time to time, and a copy of the list certified by an officer of Melb PC is conclusive evidence of the prices applicable at any time.

9. Melb PC may make rules for the use by the subscriber of Internet access, including rules as to online time limits, transmission volume limits, excess usage fees, terms of payment and any other matter at all that Melb PC considers desirable, provided that there shall be no reduction in the access time of the subscriber during any period for which the subscriber has paid in advance unless the service provided by Melb PC has been or is to be enhanced so as to make up for any lost value. Melb PC may alter the rules on not less than fourteen days notice to the subscriber. A copy of the rules certified by an officer of Melb PC is conclusive evidence of the rules applicable at any time. The rules from time to time will apply as if they were set out in full as terms of this agreement.

10. The subscriber must not deliberately or recklessly do anything that damages Melb PC's equipment, software, setup or services.

11. The subscriber must not use Internet access to annoy, harass or harm other Internet users.

12. The subscriber must not use Internet access for any unlawful purpose or in any unlawful manner.

13. The subscriber will keep safe and confidential any access numbers, codes or passwords allotted to them by Melb PC and notify Melb PC without delay of any disclosure of those things.

14. Melb PC may terminate the subscriber's Internet access immediately if the subscriber breaches this agreement or the rules, or fails to promptly pay any money owed to Melb PC, or ceases to be a member of Melb PC.

15. Subject to the previous clause, either party may terminate this agreement by 14 days' notice to the other save that Melb PC must not terminate this agreement while the subscriber has credit for advance payment of fees without refunding a pro rata part of those fees or making alternative Internet access arrangements for the subscriber, and termination by the subscriber does not affect any debt owed to Melb PC at the time of termination.

16. Melb PC may delete without notice any material found on its storage disks that is unauthorised, unlawful, obscene, dangerous, excessive in volume, uncollected for an excessive period, or in an unauthorised place.

17. Melb PC may delete without notice any material found on its storage disks without giving any reason for doing so.
18. Melb PC may make and keep any record it requires for the purpose of this agreement or the rules or for the operation of its services.
19. The Description of Service, Internet Access Agreement, and the services as described on this application form constitute the entire agreement between the parties, and neither of them relies on any term, condition, warranty, collateral contract, representation or promise not set out in those parts of this application forms.
20. Any notice given about any matter concerning this agreement may be given by fax, e-mail or post at the last fax number, e-mail or postal address notified to the sender and is deemed to have been received at the time when it would have arrived in the ordinary course of the relevant type of transmission.
21. The subscriber must not transfer, sell or share Internet access rights, or allow the account to be used by any other person, other than those Melb PC Family Members who are listed on this application.
22. The user's last name must be displayed in all mail and news messages. The user's first name or initials may be displayed as desired.
23. Commercial traffic, in the form of private messages and advertisements in newsgroups designated for that purpose, is permitted within the bounds of net etiquette.
24. The *Organization*: field in private electronic mail or public newsgroup article headers must always be *Melbourne PC User Group, Australia,* the name of the service provider. Any other organisation or business name is permitted only in the four-line (maximum) "signature" text that is optionally inserted at the end of the message or article.
25. Connection of any networking system or device that permits multiple users to share one account simultaneously is not permitted.
26. The *From:* field used in mail and news messages must be the Melb PC assigned user name, e.g. *jjones@melbpc.org.au* not the address where a reply is sought, e.g. *jjones@pobox.com.au*. Such an arrangement should be managed by use of the *Reply-To:* field.
27. Melb PC may assign its rights and obligations under this agreement to an Internet access provider that is of equal standard to Melb PC, and after notice of assignment is given to the subscriber, this agreement shall have operation as if it had been entered into between the assignee and the subscriber and Melb PC's rights (except for its right to recover any money owed to it immediately before the assignment) and obligations under this agreement shall be at an end.
28. The parties submit to the law of Victoria, Australia in relation to any the interpretation of this agreement, or any dispute arising out of it.

Service Required and Payment

Subscription	$ 140.00
Melb PC Internet Kit software Windows 3.x version @ $10.00	$................
Melb PC Win 95/98/NT setup @ $5.00	$................
Total	$................

Tick ☑

☐ Cheque for above total is enclosed.

or

☐ Debit my card with $................

☐ Bankcard / ☐ MasterCard / ☐ Visa

Expires: ....../......

Number:

____ ____ ____ ____

Name on Card ....

Signature: ....

Applicant Details

First Name: ....

Last Name: ....

Membership Number: ....

Postal Address: ....

....

Postcode: ....

Telephone

Day (..........) ....

Evening (..........) ....

Job Title: ....

Employer: ....

Tick ☑

My age is: ☐ 18 or above, ☐ Below 18

I hereby apply for the Internet Service described on this and the previous page

Signature: ....

Additional Family Members who will share the one account/user name:

Name: ....

Signature: ....

Name: ....

Signature: ....

Name: ....

Signature: ....

Applicant(s) to Complete (CAPITALS, please)

Parent/Guardian to Complete

(If any of the applicants is below the age of 18) I am the parent/guardian of the applicant. I am aw of the nature of information available through the Internet and support this application.

Name ....

Telephone

(day) (..........) ....

Signature: ....

User Name

List below the user ("login") names you would like, order of preference, up to eight lowercase characters and/or numerals. Write very clearly, to avoid our confusing certain letters. User names are expressed i lowercase letters and numbers and must represent your real name in some recognisable way, e.g. John Jones might request user names such as john, johnj, jjones, etc. Any user name that is already allocated c deemed unsuitable in the opinion of the system administrators will not be allocated. Preferred full name (e.g. *John J Jones* or *Jones Family*), to be recorded on the system.

....

Previous name (if to be changed):

Choice 1

Choice 2

Choice 3

Choice 4

Choice 5

Office Use Only

☑ Tick as applicable

☐ Form and fee correct

☐ Parent of under age applicant contacted (date) ....../....../19

☐ Membership database checked and updated

☐ Incomplete form returned to sender (date) ....../....../19

☐ Acknowledgment returned to sender (date) ....../....../19

Initials of office staff ....

Shareware/Freeware Library Update

Glenn Webster

Updates

IELB 8857-8858 SMARTDRAW Ver 3.25 2 Disk Set)

nartDraw is an easy-to-use graphics program at takes the drawing out of drawing. With nartDraw you simply drag and drop lines and iapes with your mouse to create beautiful, ofessional-looking drawings and diagrams. ou can draw circuit diagrams, fishbone diagrams, iemical formulae, maps, mechanical and ectrical engineering diagrams, invitations, ertificates, signs, timelines and many other types business and technical graphics. SmartDraw itomatically aligns shapes, lines and text for you. s built-in library of design styles lets you pick ofessional-looking colour schemes, shadows, id textures with the click of a mouse. Libraries of martDrawings provide an unlimited selection of pecial shapes, objects, and pieces of clip-art that ou can edit or add to. Adding text to your drawing an be done by selecting the object and typing the xt. Your text will appear inside the object, and it ill stay there even when the object is moved.

you type more text than the object can hold, or if ou increase the size of the text, the object will utomatically grow to accommodate it. You can fill shape with colour or change the weight, style and olour of its borders. Lines can be modified by hanging the weight and style, and by adding rrowheads (many different kinds of arrowhead re available).

martDraw can automatically arrange the objects your drawings into neat, regular patterns, aligned an invisible grid. The 16- and 32-bit versions of martDraw share common file formats so libraries nd drawings can be exchanged across both ersions of the program. This version includes undreds of new symbols and templates, new urved lines, an outline-only mode for faster fit-to-age view drawing, better linking of shapes to each ther, and the ability to apply colour and shadow tyles independently.

'his 16-bit version of SmartDraw requires an 0386 (or better) PC and MS Windows 3.1x. It has ewer features than SmartDraw Standard (available n disks MELB 8859 and 8860).

32-bit version of this program is available on lisks MELB 8859 and 8860.

MELB 8859-8860 SMARTDRAW STANDARD Ver 4.30 (2 Disk Set)

SmartDraw is an easy-to-use Windows program hat anyone can use to draw great looking lowcharts, diagrams, forms and other business raphics. The program automatically aligns shapes, lines and text. Its unique, built-in library of design styles lets you pick professional looking colour schemes, shadows and textures for your drawings with the click of a mouse. Libraries of SmartDraw Symbols provide an unlimited selection of clip-art that you can edit or add to. SmartDraw provides drag and drop drawing, lines that automatically stay connected to shapes when they change size or position, text editing that automatically places text above, below or inside shapes, and shapes that grow to fit the text. SmartDraw works as a stand-alone program, and as part of Microsoft Office, Lotus SmartSuite, WordPerfect and other programs that support Object Linking and Embedding (OLE). You can insert a SmartDraw drawing directly into Microsoft Word for Windows, using the Insert Object command. Although SmartDraw is aimed at NON-graphics professionals, technical professionals will find it very useful for diagrams and flowcharting. Some of the other many features in SmartDraw include: print preview, one-step creation of common diagrams, user-defined zoom level and fast library drawing. The 16- and 32-bit versions of SmartDraw share common file formats so libraries and drawings can be exchanged across both versions of the program. This version has many new features including, automatic text resizing, tables, more colours, a new colour menu, absolute positioning of objects, infinite connection points, a multiple selection tool and keyboard navigation. SmartDraw Standard requires an 80486 (or better) processor, running MS Windows 95/98/NT. Registration is US$49 or A$89 and provides 1500+ additional symbols and templates, an electronic manual on CD and 90-day technical support. A printed 180-page manual is available at extra cost.

A 16-bit version of this program is available on disks MELB 8857 and 8858.

MELB 9050 CUTEFTP Ver 4.0 (32-BIT)

CuteFTP is one of very few programs that enable novice users to utilise the capabilities of FTP without having to know all the details of the protocol itself. Yet it has enough features to be useful to power users as well. It uses drag and drop, bookmarks, automatic renaming, and download resuming to make FTP easier, and it includes a macro feature that you can use to record frequent tasks and play them back later with another file. Some other key features include directory upload, directory compare, remote site editing, queued uploading and downloading, complete directory overwrite and delete, and a progress rate display. CuteFTP also offers MP3 and file searching, and a persistent file transfer feature that automatically reconnects and resumes a transfer until the file requested has been successfully uploaded or downloaded. The Site Wizard has been designed to aid users in connecting to their FTP sites. The program provides integration with CuteHTML, right-click action on your PC to automatically send files to selected sites, connection/transfer error prompts, Windows Explorer integration, remote file editing, and the ability to delete to the Recycle Bin. This version has a redesigned interface, connection wizard, quick connect bar, local bookmarks, site-to-site transfers, scheduling, auto-update, connection/transfer error prompts, resume queue transfer, logging of FTP sessions and macro record and playback scripting. CuteFTP requires a PC running MS Windows 95/98/NT4, some form of Internet connection (modem, ISDN, cable or network) and 16 MB of free RAM. This is a 30-day trial version and includes CuteHTML. At the end of the 30-day trial period, some functions will be disabled, and the program will begin displaying banner ads. Some of the disabled functions include multiple file uploads and downloads, queue functions, the Transfer Scheduler, site-to-site transfers, and many others. You can avoid this loss functionality by registering CuteFTP for US$40.

A 16 bit version of CUTEFTP is available on disk MELB 8796.

MELB 9192 MELBPC INTERNET SETUP MASTER (WIN 9X/2000) Ver 3.0

The MelbPC Internet Setup Master is a simple program which you can use to configure your Internet browser software for use with the MelbPC Internet Service. The program requires that you have some Internet software already installed on your computer. This may be from the original installation of your operating system, or from some other source (such as one of the many computer magazines with CD-ROMs attached). This program will enable you to post-configure copies of Microsoft Internet Explorer (versions 3.x, 4.x and 5.0), Microsoft Mail and News 3.x, Microsoft Outlook Express, Microsoft Exchange/Messaging (Inbox), Microsoft Outlook 97, Microsoft Outlook 98, Netscape Navigator (versions 3.x, 4.x), Netscape Communicator (versions 3.x, and 4.x), Eudora Lite and Eudora Pro. Running the Setup Master from Windows will correctly configure your browser and create a choice of diallers. Users with MelbPC software already installed will be able to correctly reset all of their existing configuration by simply running the program. If you have software installed that is configured for another provider, and this software is suitable for a second profile, this installation will set up Melb PC as a second profile, thus enabling you to choose which provider to use for each session. This version provides support for MS Windows 2000. It will not work with MS Windows 3.x. The MelbPC Internet Setup Master is suitable for use with MS Windows 95/98/NT/2000 only.

MELB 9256 IRFANVIEW (32-BIT) Ver 3.12

IrfanView is an image viewer and converter for the Windows 95 and Windows NT operating systems. It contains many features common to most image viewers, but it also has batch conversion and a built-in slideshow function. The list of supported file formats is lengthy, but the formats MPG/MPEG, ANI, AVI, PSD, ICO, CUR and JPG/JPEG are some of the formats that it provides support for, without plugins. Plugins are available (from the author) that enable you to play MP3 audio files, and for the Dicom/ACR file format also. This version also corrects some minor bugs and enables gamma correction for all loaded images. IrfanView requires MS Windows 95 or later, 8 MB of RAM and VGA or better graphics. Registration is US$10.

MELB 9307-9308 AXIALIS AX-CDPLAYER Ver 2.5 (2 Disk Set)

If you're not content with the plain-looking CD player that comes with Windows, then the AX-CDPlayer is for you. This program looks just like the front panel of a car stereo and functions in the same way. Apart from playing your audio CDs, the AX-CDPlayer has a number of other features built-in. Play-back options such as shuffle, repeat and intro scan can be used, or a personalised playlist can be set up. You can enter details of a CD such as track details, artist and title, or these details can be created automatically by querying the CDDB (CD database) from within the program, although the shareware version doesn't allow the information to be saved. This update comes with support for Enhanced CDs (those with audio and data on the one disc), tooltips on the front panel buttons and support for Proxy servers with authentication for use with the Internet's CDDB. AX-CDPlayer requires MS Windows 95 or later, a CD-ROM Drive and a sound card that has all of the drivers installed correctly. Registration is US$25.

New Disks

MELB 9475 DISKSPACE EXPLORER 2000 Ver 2.1

diskSpace Explorer 2000 is a powerful, intuitive and easy-to-use space manager for Windows, that enables you to manage your disk space and make intelligent allocation decisions for its limited capacity. You can use the easy-to-use graphical interface to instantly see and explore where your hard drive space is going, and how to use your space more efficiently. You can even generate a report, or a pie chart, for your records or later analysis. diskSpace Explorer 2000 can also help you to save space by deleting individual folders, or by archiving them into compressed ZIP files. The program has full support for FAT 12, FAT 16, FAT 32 and NFTS drives, as well as hard disks, floppy disks, and ZIP and JAZ drives. diskSpace Explorer Pro provides support for network drives and special features for network administrators. Freeware.

MELB 9476 INVISIBLE SECRETS Ver 2.01

Invisible Secrets is an easy-to-use but powerful encryption/steganography program with a wizard interface. Many cryptographic programs just transform data into unreadable encrypted data and save it as a file. Invisible Secrets offers you the ability to encrypt and hide files in other files (carriers) which are not suspected of encryption. The program will encrypt sensitive data using a specified password and cryptosystem (algorithm), then it will insert the ciphertext into the carrier. The resulting carrier (which contains the real message) can be attached to a fake or innocent email message, or published on a web page near many other pictures (or other carriers) from where the addressee (the only person who knows which is the right image) can download it without revealing their identity. This method has the advantage of making the message almost invisible, and considerably raising the work of anyone wanting to break the code. Invisible Secrets is very flexible. You can develop your own algorithms or carriers and integrate them very easily into the program. The program supports JPG files, PNG files (without any data length restriction) and BMP files (with source data proportional to the size of the image) as carriers. You can use data compression before the encryption/hiding process, you can mail the resulting carrier after the process, or you can place it on the Internet through an FTP connection. Invisible Secrets includes a fake messages generator and perfect local security (all of the temporary files used in the process are wiped out). You can optionally wipe the source data or the original carrier after processing. The program uses the complex wiping method of seven passes, wiping with randomly generated patterns. This makes hardware recovery impossible. This unregistered version restricts key length to just five characters (40 bits). Invisible Secrets is ad-supported freeware.

MELB 9477 POWERNET 2000 INTERNET BROWSER Ver 3.01

You can use PowerNet 2000 to browse the web without the hassles of managing multiple windows. All browser windows are opened in tabs, which means that you can easily, and conveniently, switch between open screens. PowerNet has a built-in search feature which that you can use to search the web, and open up links in different tabs without losing your search criteria. There is no more paging back and forth between search engines and screens. The browser includes documentation in the form of a help file. PowerNet's Favorites enables you to store your current favorites, and open all of the favorites in a folder into independent tabs. This version of PowerNet 2000 is advertising supported freeware. A non-advertising version is available for US$20.

MELB 9478-9481 TALKING GREETING MAKER Ver 1.0 (4 Disk Set)

You can use Talking Greeting Maker to send a talking, animated greeting to your friends and family on the World Wide Web. The cool, animated characters are based on Microsoft's Agent technology. You can decide which characters to use, what they'll say, and which animations they'll perform. It's just like directing a movie. The software comes with a variety of built-in greetings, ranging from a simple 'Say Hi' greeting, to more advanced greetings that contain jokes or stories. Talking Greeting Maker is easy to use and provides hours of creative fun. The results will surely amaze your friends. The program works with the TalkingGreeting.com service, to deliver your greetings via email. Your friends will receive a short email message directing them to the TalkingGreeting.com web site where they can download and play the Talking Greeting. They do not need any special software to receive the greetings since the program will download and install any required software that is not present already on their system. Freeware.

MELB 9482 GROOVE BOX

GrooveBox is a simple-to-use program that you can use to create your own dance, techno and rave music. It comes with twenty short beats, that loop to form the basis of your music, and twenty Voice grabs to break up the music. Although simple and easy-to-use this flash-based music program can be used to create long and complicated creations. It is a useful program if you want to become involved in creating your own compilations. Groove Box requires MS Windows 9x or later, a mouse and a sound card.

MELB 9483 ECLEAN 2000 Ver 2.0

eClean is a simple text editor (word processor) w very specialised text replacement and formatting features. eClean, as the name suggests, is designed to clean-up forwarded email messages Its features centre around three main tasks - removing forwarding characters, reconstructing paragraphs, and mass search and replacement. When you forward email, many editors add speci characters to the beginning of each line in the original message to highlight the text being forwarded. Many times this character is a greater than sign (>). When email is forwarded several times, it can be very difficult to read. By default, eClean is configured to remove tabs, spaces and characters from the beginning of each line when this task is selected. You can add new characters to the list if required. Email is often broken into lines of 80 characters when it is sent. This, combined with the addition of forwarding characters, can make forwarded email illegible. Sometimes, forwarded email may have several lines of text that contain only one word. eClean ca reconstruct these lines into paragraphs for use wi any email editor or word processor. You can use the search and replace feature to alter any text in email with one simple click of the mouse button. This is particularly useful for emails that contain "curly quotes" which some email editors cannot display. Often these special characters appear as black block character or some other odd looking character in your text. eClean is installed to your system tray. This means that the programs functionality is available to you as soon as your P has finished booting. eClean requires MS Window 95/98/NT. Registration is US$10.

MELB 9484-9485 EASYMP3 Ver 1.0.0 (2 Disk Set)

EasyMP3 is a software digital audio encoder for Windows. You can use it to take the digital information from audio compact discs and convert it into the highly-compressed MP3 format which is easily stored on your computer and quickly played back on your computer's speakers. This process i known as "ripping" and "encoding". EasyMP3 can do both at the same time. It is a complete solution for you to immediately begin putting the power of MP3 to use. MP3 is a shortened name for "MPEG layer 3", a file format which stores audio files on a computer in such a way that the file size is relatively small, but the songs sound nearly perfec The MP3 audio format has become the standard format for music and audio over the Internet for an important reason - it is smaller and it sounds bette than other audio formats. EasyMP3 was designed to be as intuitive and user-friendly as possible. It is tightly integrated into Windows, so after installatio you can simply insert your favourite audio CDs an drag your favourite tracks onto the desktop. EasyMP3 will take care of the rest. At any time while you are encoding, you can run other programs on your PC with no loss in compression or audio quality. The encoding may just slow down a little bit. Until now, the complexity of MP3 software has prohibited many people from encoding their own MP3 files. EasyMP3 makes it easy to put your music collection on your PC. Othe features of the program include variable bitrate encoding, encoder quality setting, ripping to a .WAV file, CD track renaming, ID3 tag editing, mono/stereo encoding, and optional Internet connection to the CDDB Disc Recognition Service.

Did You Know?

That you can purchase your shareware, pay your membership fees, enjoy an entertaining presentation, soak up the social atmosphere of a Melb PC gathering and then go out to dinner afterwards, all on the same evening?

David and Glenn Webster have the Group's **entire shareware library** and a good supply of floppy disks at every monthly meeting. Order your shareware and they will fill your order on the night. What could be easier or more convenient?

u can use this service to get the artist, title, track, dit and other information about the CDs that you y. Suitable MP3 players that you can use with syMP3 include WinAmp (a basic version is ailable on disk MELB 9266, and an enhanced rsion is available on disks MELB 9466-9467) and nique (available on disks MELB 9399-9400). ring the trial period EasyMP3 will add a sound e to each audio clip that you encode. Due to tent restrictions, the EasyMP3 encoder will only code twenty full audio tracks. EasyMP3 requires Pentium running MS Windows 95/98/NT/2000, MB of RAM, and either a CD-ROM, CD-R or D-R/W drive. Registration US$20.

MELB 9486-9488 CD RECORDING STUDIO
3 Disk Set)

D Recording Studio is a program that you can e to copy CDs. You can do this copying on-the- to save precious time. The program copy any rmat of CD, whether it is music or data that is corded. CD Recording Studio can be easily vigated around with a point-and-click user erface. The program also comes with an ntelligent assistant" to help with data CD and hard ive folder copying. CD Recording Studio requires S Windows 95 or later, a mouse and a CD Writer.

MELB 9489 CLIPBOARD PILE Ver 2.1

ipboard Pile is a powerful but easy-to-use pboard manager. It automatically saves clipboard ms to the currently active collection. Items can retrieved later, at any time. Windows allows you place only one item at a time onto the clipboard - pying another item to the clipboard overwrites e previous content. Clipboard Pile has many her features. It provides easy pasting, thumbnail ews of images, metafiles and text, drag & drop of xt/images/URLs, and rich text editing (with jects and URL support). Power paste is a owerful function that enables you to paste a ries of items, very rapidly. You can capture the ctive window (with Alt+Print-Screen), the desktop indow (with Print-Screen) or colour (with trl+Shift+L). Autocapture is turned on by default. ou can create new collections, search for text in e current clipboard item, the current collection or ll collections. The program provides a full screen review of images which can be saved as BMP, IF or JPG files. Clipboard Pile supports all lipboard formats and requires MS Windows 95/98/ IT. It is advertiser supported freeware. Registration f US$15 removes the advertisements and rovides free updates and support from the author.

MELB 9490-9491 CUTEZIP Ver 1.0
(2 Disk Set)

CuteZIP is a compression utility designed to ompress and extract files into and from archives. rchives, with file extensions such as ZIP and CAB, are encoded versions of uncompressed files that require considerably less disk space. Due to their smaller size, archives save hard disk space and require less time to transmit over the internet. CuteZIP has many features. It has been designed to be intuitive and simple to use for the novice, yet powerful enough for the advanced user. CuteZIP includes an easy-to-use Drag and Drop interface. It can uncompress multiple files simultaneously by selecting the archives then right-clicking, and work with multiple archives within the same window. The built-in Twofish encryption allows for fast, reliable password protection for archives while different levels of compression provide a choice between speed and efficiency. CuteZIP supports the ZIP, CAB, GZip, Tar, ACE, ARJ, RAR, PAK and PK3 archive types, giving you much flexibility. (ACE, ARJ and RAR require external third party applications). CuteZIP also supports PKZIP compression, to provide greater compatibility. The CD ripping capabilities of CuteZIP enable you to quickly and easily create MP3, WAV and WMA files from audio CDs. The program has been integrated with CDDB2, to automatically download track/album/artist names for any CD. Customisable smart settings provide greater flexibility and productivity and the program remembers custom settings between sessions. You can encrypt large files across diskettes or ZIP drives. The volume size can be configured by you, or automatically detected by CuteZIP. Other features include a status bar, easily accessible and comprehensive help, and hints for easier learning and navigation. CuteZIP requires a PC with MS Windows 95/98/NT and 16 MB of RAM. Registration is US$20.

MELB 9492-9493 DATARAT Ver 1.3C
(2 Disk Set)

DataRat makes it easy to file away snippets of information that you want to keep for future use — an Internet addresses, registration codes, it doesn't matter. File it away in a DataRat folder and you'll have it when you need it. The program uses a hierarchy of folders, topics and notes to store your information neatly for easy reference. Each DataRat folder has its own Topic List that shows the main topics in the Folder. If you wish, you can divide your list into sub-topics to provide more detail in your folder. Each topic in the list can have a set of Notes about that topic and each note has a Text field for you to type information about the note. The Reference field can hold a Web address that can be accessed at the click of a button. A sample folder is included with the program to give you some ideas of how this useful and versatile program can be used. As well as creating your own folders, you can even download prepackaged folders from the DataRat Web site. These folders span a variety of topics such as education, health, genealogy, finance, etc. DataRat includes search, quiz and print features that make the information you have stored more accessible and more useful. You can use Search to find a word or phrase in your data. Quiz enables you to test yourself on data that you have stored for review purposes, while the Print feature can send the information in your Folder to the printer or to a text file. DataRat requires MS Windows 3.1x/95/98. It will not work with MS Windows NT. Before registering, the program is limited to ten Folders, and the Quiz and Export features are disabled. Registration is free.

MELB 9494 DOPPLEGANGER Ver 3.1

Doppleganger is a simple-to-use yet powerful utility for performing unattended, timed backups of important files and folders on your PC. Files can be backed up to a second hard drive, a removable drive (such as a Zip drive) or a network drive. Support is included for multiple users and multiple workstation operation. Doppleganger saves you time by only backing up files that have changed since the previous backup. It provides logging facilities for ease of maintenance, and an Explorer-style interface for easy selection of the files and folders to be backed up. Doppleganger requires MS Windows 95 or later, 8 MB RAM and suitable backup media.

MELB 9495 SMARTBOARD 2000 Ver 2.50

SmartBoard 2000 is a "Clipboard Extender" for Windows 95/NT. The normal Windows Clipboard can only retain a single item at a time — as soon as you copy a second item on to the Clipboard you lose the first one. With SmartBoard running that is no longer true. SmartBoard retains multiple "Clip Items", even across a Windows restart, and allows simple pasting back of any of them into any application. SmartBoard runs as an invisible task in Windows; there is no icon cluttering up your desktop. Simple mouse-clicks or hot-keys pop up SmartBoard on top of your current application enabling you to select the "Clip Item" you want to paste, then disappears out of the way again having pasted it automatically into the current application. Normally you don't even need to use the application's paste command. Using Smartboard is a complete no-brainer. You just pop it into your Start-up group and forget it until you need it. It appears almost as though it was "built-in" to the operating system itself. The pop up menu can give you instant access to all of your captured (and manually created) clip-items in a menu built on your design of categories and subcategories. You select what you want and it pastes straight into your application.

There is no need to switch back and forth between your application and your clipboard extender like other products. The ability to give nicknames to items and password protect categories makes it the ideal place to keep user ids, passwords, credit card numbers, website URLs, etc, just a few key-strokes away. SmartBoard supports all clipboard formats, and you can configure it in exactly the way that works for you. You can specify what clipboard formats to capture, from what programs, limit captures to items under a specific size and specify the preferred formats from particular programs. All of the usual elements of a modern Windows application, such as toolbars, fly-by and context sensitive help are included to make this program easy to use. SmartBoard 2000 requires a PC running MS Windows 95 or later, and 1 MB disk space. Ad-supported freeware. ❑

Rubik's Cube — Part 4

Solution Continues

Ken Holmes

Middle Layer Edge Cubes

In Part 3, we sorted the top layer and we now invert the whole cube to put it on the bottom. We only have to deal with edge cubes in the middle layer and these may be at any of eight positions with two possible orientations in the top or middle layers. We must preserve the bottom layer and any previously sorted middle edge cubes but can freely use the top layer. Transferring a cube between top and middle layers involves seven face rotations which need close study if you wish to understand them. They exhibit a sort of asymmetry due to the need to reverse later any rotations which disturb already sorted cubes.

In Listing 8, you may note that, in SUB Edges2(), we first check the middle layer for the l/f cube and, unless it is already correct, move it to the top layer. Next, we check the top layer for the l/f cube and move it to u/r. From here, there are two alternative routines, in SUB Edges2a(), to transfer it to its correct position and orientation.

Top Corners

Unless something has gone seriously wrong, the four top corner cubes are now in the top layer but probably not i correct position or orientation. Each h one face the same colour as the centre of the U face, with the other faces the same as the centres of two adjacent sid faces. In accordance with the procedur in Don Taylor's book, we need to get

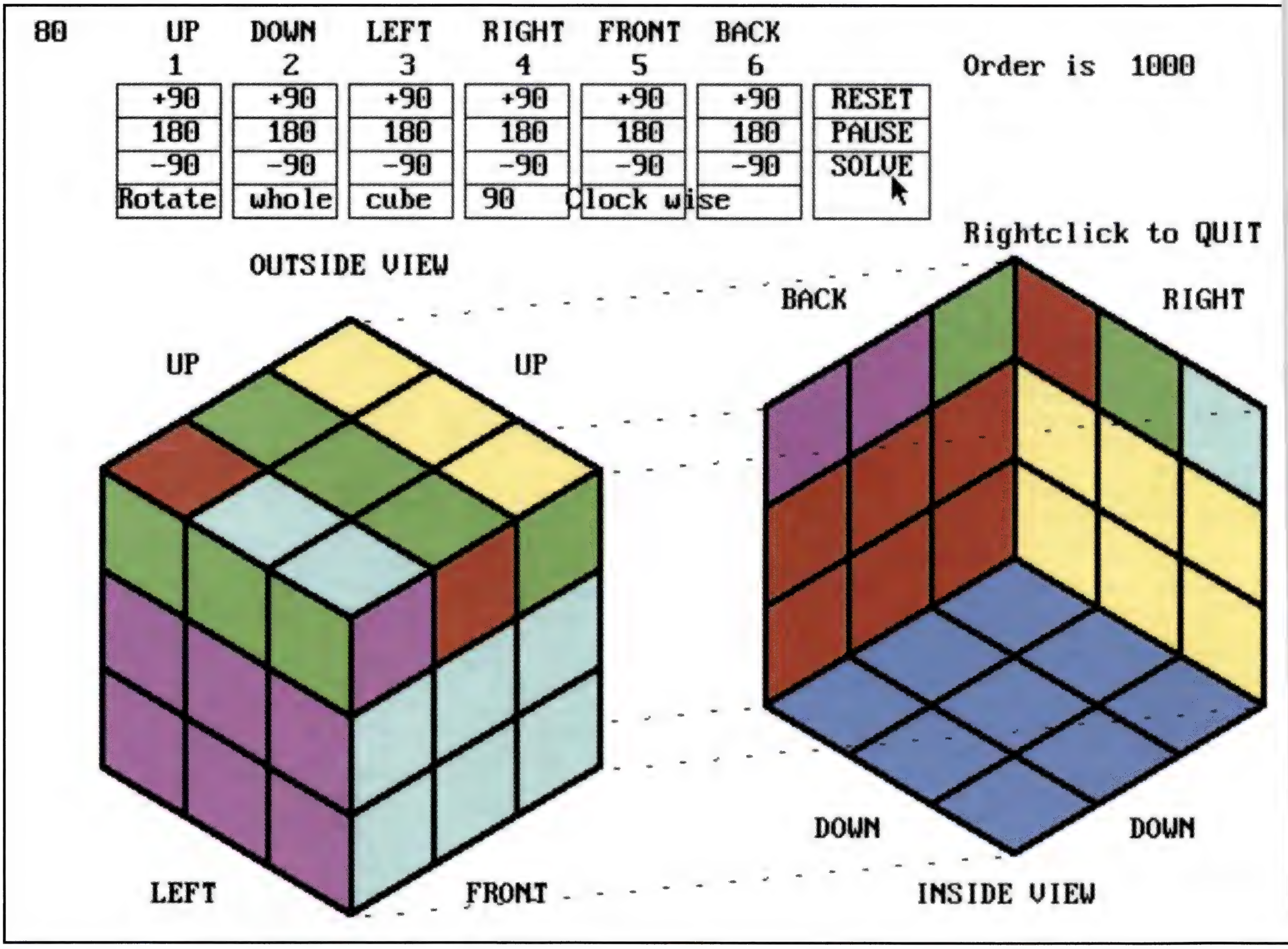

Figure 4. Bottom and middle layers completely sorted.

m into one of four patterns and then
ly an appropriate sequence of moves
get them into correct position. At this
ge, we ignore their orientation as this
ll be corrected later in SUB Twirl().

identify the pattern we will use a
ır digit variable called “order” in
iich the thousands digit will be 1 if
u/r/f cube is correct, the hundreds
git 1 if u/r/b is correct, the tens digit 1
ı/l/b is correct and the units digit 1 if
/f is correct. If we get “order” equal
1111, all cubes are in position. The
tterns which can be used to go to a
oper sorting have u/r/f correct but u/r/
ncorrect; if we don’t meet this
ndition, we rotate the U face until we
so. In Listing 9, to achieve this we
e a DO..LOOP which we don’t even
ter if order = 1111. The useful values
r “order” are 1010, 1001 and 1000 so
look for 900 < order < 1100 to
clude values like 1100 and 0100
hich don’t suit us. Orders 1010 and
01 entail a swap of two cubes but
00 entails a circulation of three cubes
either clockwise or anticlockwise
rection.

we need to go through the loop more
ıan once the whole cube is rotated 90
g. about the vertical axis which might
nvert, say, a 0100 pattern to 1000. Of
urse, you could devise a correction
quence directly from 0100 and it is
ırely for convenience, and minimising
de, that we adopt this approach. Note
ıat the correction sequences under
ELECT CASE are quite complex and
pert cube twiddlers no doubt find the
ce mnemonics useful in memorising
ıem. It is simpler to position the cube
rst in 10?? order to avoid a further
ıree sets of four sequences.

he Story so Far

ig 4 shows our progress — the bottom
nd middle layers are completely sorted
nd we have the top corner cubes in
osition but not necessarily correctly
riented. In Part 5, we will position the
p edge cubes, ignoring orientation.
hen we will check the top edge cubes
nd, if necessary, flip them to match
aces, and finally return to the top
orner cubes to twirl them, clockwise
r anticlockwise as necessary, so that
heir colours end up on the proper
aces. ❑

Listing 8

```
SUB Edges2
 PrStr”Invert whole cube”, 3’about L face axis
 MidLayer 5: MidLayer 5      ‘need 2 x 90 deg.
 Rotate 6, 2: Rotpr 5, 2: PrStr blank, 6
 ‘The sorted layer is now on the bottom.
 PrStr “Middle layer edges”, 3  ‘tell the user
 ‘Rotating about vert. to 4 separate positions
 FOR n = 1 TO 4: lc =c(3, 2, 2): fc=c(5, 2, 2)
 ‘First check 4 middle edge positions for l/f.
 ‘if l/f in correct position and orientation,
 ‘leave it. Otherwise, move it to top layer.
 ‘First, if l/f in position but flipped
  IF c(3, 1, 2) = fc AND c(5, 2, 1) = lc THEN
   PrStr “l/f to top layer   “, 4
   PrStr “ie. FU2RUR-1U2F-1  “, 5
   Rotpr 5,1: Rotpr 1,2: Rotpr 4,1: Rotpr 1, 1
   Rotpr 4, 3: Rotpr 1, 2: Rotpr 5, 3
  END IF
  ‘Now, check other 3 vertical edge positions
  ‘if l/f at r/f, move to top layer
  IF c(4, 2, 3) = fc OR c(5, 2, 3) = fc THEN
   IF c(4, 2, 3) = lc OR c(5, 2, 3) = lc THEN
    PrStr “r/f to top layer   “, 4
    PrStr “ie RU2BUB-1U2R-1   “, 5
    Rotpr 4,1: Rotpr 1,2: Rotpr 6,1: Rotpr 1,1
    Rotpr 6, 3: Rotpr 1, 2: Rotpr 4, 3
   END IF
  END IF
  ‘if l/f at r/b, move to top layer
  IF c(4, 2, 1) = fc OR c(6, 1, 2) = fc THEN
   IF c(4, 2, 1) = lc OR c(6, 1, 2) = lc THEN
    PrStr “r/b to top layer   “, 4
    PrStr “ie. BU2LUL-1U2B-1  “, 5
    Rotpr 6,1: Rotpr 1,2: Rotpr 3,1: Rotpr 1,1
    Rotpr 3, 3: Rotpr 1, 2: Rotpr 6, 3
   END IF
  END IF
  ‘if l/f at l/b, move to top layer
  IF c(3, 3, 2) = fc OR c(6, 3, 2) = fc THEN
   IF c(3, 3, 2) = lc OR c(6, 3, 2) = lc THEN
    PrStr “l/b to top layer   “, 4
    PrStr “ie. LU2FUF-1U2L-1  “, 5
    Rotpr 3,1: Rotpr 1,2: Rotpr 5,1: Rotpr 1,1
    Rotpr 5, 3: Rotpr 1, 2: Rotpr 3, 3
   END IF
  END IF
 ‘NOW, find l/f in top layer, transfer to u/r,
 ‘then to l/f using Edges2a()
  IF c(4, 3, 2) = fc OR c(1, 3, 2) = fc THEN
   IF c(4, 3, 2) = lc OR c(1, 3, 2) = lc THEN
    Edges2a          ‘candidate already at u/l
   END IF
  END IF
```

Continued next page...

...from page 57

```
   IF c(6, 2, 3) = fc OR c(1, 2, 3) = fc THEN
    IF c(6, 2, 3) = lc OR c(1, 2, 3) = lc THEN
     PrStr “u/b to u/r          ”, 4
     Rotpr 1, 1: Edges2a      ‘candidate at u/l
    END IF
   END IF
   IF c(3, 2, 1) = fc OR c(1, 1, 2) = fc THEN
    IF c(3, 2, 1) = lc OR c(1, 1, 2) = lc THEN
     PrStr “u/l to u/r          ”, 4
     Rotpr 1, 2: Edges2a      ‘candidate at u/l
    END IF
   END IF
   IF c(5, 1, 2) = fc OR c(1, 2, 1) = fc THEN
    IF c(5, 1, 2) = lc OR c(1, 2, 1) = lc THEN
     PrStr “u/f to u/r          ”, 4
     Rotpr 1, 3: Edges2a      ‘candidate at u/f
    END IF
   END IF
  IF n < 4 THEN RotCube
  NEXT n
  PrStr blank, 3: PrStr blank, 4
  PrStr blank, 5: PrStr blank, 6
 END SUB
 SUB Edges2a ‘After Edges2() puts l/f cube to
 ‘u/r position, this puts it in correct
 ‘position and correct orientation.
  PrStr “u/r to l/f          ”, 4
  IF c(1, 3, 2) =c(3, 2, 2) THEN ‘U face of u/r
   PrStr “ie. FU2RUR-1U2F-1   ”, 5  ‘is lc
   Rotpr 5,1: Rotpr 1,2: Rotpr 4, 1: Rotpr 1, 1
   Rotpr 4, 3: Rotpr 1, 2: Rotpr 5, 3
  ELSE           ‘ie. U face of u/r = fc colour
   PrStr “ie. UFU2RU-1R-1U2F-1 ”, 5
   Rotpr 1,1: Rotpr 5,1: Rotpr 1, 2: Rotpr 4, 1
   Rotpr 1,3: Rotpr 4,3: Rotpr 1, 2: Rotpr 5, 3
  END IF
 END SUB
```

End of Listing 8

Listing 9

```
SUB Corners3
 PrStr “Sort top corners”, 3: n = 0: order = 0
 DO UNTIL (order>900 AND order<1100)....
 ....OR order = 1111
  n = n + 1             ‘number of loop
  IF n > 1 THEN RotCube ‘rotate whole cube
  ‘is u/r/f in correct position ?
  t1 = c(4,2,2): t2 = c(5,2,2)  ‘r & f colours
  i = c(1, 3, 1):j = c(5, 1, 3):k = c(4, 3, 3)
  IF i = t1 OR j = t1 OR k = t1 THEN
   IF i=t2 OR j=t2 OR k = t2 THEN order = 1000
  END IF
  ‘is u/r/b in correct position ?
  t1 = c(4,2,2): t2 = c(6,2,2)  ‘r & b colours
```

Continued opposite...

For the Bookshelf

Major Keary

Published by Woodslane Press, *The Australi Internet Book*, now in its fourth edition, is pitched at the beginner-to-intermediate us level. The authors have assembled a useful compendium of the kind of information needed by most Internet users and potenti users. For many it may be the only guide they will need.

Internet Telephone

In this issue of *PC Update* there are some articles on *voice-over-net* (VON), and *The Australian Internet Book* mentions that specifically. A chapter, “Write, talk and worl together” describes Internet Relay Chat (IRC), online meetings, video conferencin fax, and Internet telephone. The discussion is brief, but it raises an interesting point: th availability of audio with IRC has attracted some users away from VON. The Pulver si is not mentioned, but a couple of others sound interesting: *www.net2phone.com*, *www.bestphonerates.com*, and *http://home.rochester.rr.com/netphones*.

A Business-like Guide

The book is designed so that each item of information is contained to a two-page spread with a heading is in the form of a question, such as *Which browser should I use?*. In some instances the two-page format give way to single-page, but the reader never has to turn a page to continue reading. The “question” format works well; each one is a question that new and intermediate users commonly ask. The material is compact, bu presented in an easy style, and at the foot of each item is a bulleted list of salient points.

The topics are grouped in three parts: *A guid to using the Internet*, *How to make the Internet work*, and *The Australian Internet Directory*.

The *Guide* covers general exploration of the Internet and using it for: research; buying and selling; communicating with other people (IRC, email, and so on); entertainment; and putting a business online. The second part provides technical information: browsers and how they work; email; communications tools; running a Web site; and getting connected (how to get an account, set up a modem, and troubleshooting).

e directory is pretty brief, fifty-four ;es with URLs listed for twelve egories. Those who want to find sites topics that aren't listed (genealogy, for ımple) will find the list of search gines helpful. The first items covered the main part of the book explain how go about finding things on the Net, those who want to go beyond the ectories rather short list will have a ısonable foundation on which to build ɛir searches.

ıortcomings

ıere is no index. The table of contents is mprehensive, but is not a substitute for ;ood index. For example, the cover entions XML; it doesn't appear in the t of contents, but an index should have ade it easy to find.

ıoticed one inconsistency; at page 32 ere is a reference to a share price site at "changes every second" and the ader is pointed to page 15 for details. owever, there it says the particular site ɔdates every fifteen minutes, not every cond. Not mentioned is the site that ɔes provide real-time share prices: *ww.sharelink.com.au*, the first Australian 'eb-based share price and stock market formation service.

s it useful?

ı a word, yes. The overall content and its ganisation overrides my gripes. The ɔok addresses a wide range of pertinent ıestions and provides necessary technical ıformation in language that does not ıtronise the reader, but avoids unneces- ıry technical jargon. The authors make a umber of recommendations that should elp users, and they obviously have given lot of thought to the topics covered.

usiness people contemplating a Web resence should find it a particularly seful resource both for what the Internet an do for them, and the practical issues of ɛtting up a Web site.

Vell worth a place in libraries. A useful eference for anyone who provides a elp-desk service for Internet users.

:bbs and Phillips: *The Australian Internet 3ook* 4/e
SBN 1-875889-14-0
'ublished by Woodslane Press, 290 pp.,
RRP $39.95 ❑

...from page 58

```
  i = c(1, 3, 3):j = c(4, 3, 1):k = c(6, 1, 3)
  IF i = t1 OR j = t1 OR k = t1 THEN
   IF i=t2 OR j=t2 OR k=t2THEN order=order+100
  END IF
  'is u/l/b in correct position ?
  t1 = c(3,2,2): t2 = c(6,2,2) 'l & b colours
  i = c(1, 1, 3):j = c(3, 3, 1):k = c(6, 3, 3)
  IF i = t1 OR j = t1 OR k = t1 THEN
   IF i=t2 OR j=t2 OR k=t2 THEN order=order+10
  END IF
  'is u/l/f in correct position ?
  t1 = c(5,2,2): t2 = c(3,2,2) 'l & f colours
  i = c(1, 1, 1):j = c(3, 1, 1):k = c(5, 1, 1)
  IF i = t1 OR j = t1 OR k = t1 THEN
   IF i=t2 OR j=t2 OR k=t2 THEN order=order+ 1
  END IF
  IF order = 0 THEN        'no corners correct
   PrStr "Rotate top layer only ", 4
   Rotpr 1,1:n = 0:PrStr blank,4:PrStr blank,6
  END IF     'ie. need to go around loop again
 LOOP
 LOCATE 2, 58: PRINT "Order is "; order
 SELECT CASE order
  CASE 1000:    'only u/r/f correct so other 3
   'must circulate - clock or anticlock?
   lc = c(3,2,2): bc = c(6,2,2) 'l & b colours
   IF c(1, 1, 1) = lc OR c(3, 1, 1) = lc ....
     .....OR c(5, 1, 1) = lc THEN
    IF c(1, 1, 1) = bc OR c(3, 1, 1) = bc ....
     .....OR c(5, 1, 1) = bc THEN
     PrStr "ie. L-1URU-1LUR-1U-1  ", 5
       'u/l/f goes clockw. to u/l/b
     Rotpr 3,3: Rotpr 1,1:Rotpr 4,1: Rotpr 1,3
     Rotpr 3,1: Rotpr 1,1:Rotpr 4,3: Rotpr 1,3
    END IF
   END IF
   IF c(1, 3, 3) = lc OR c(4, 3, 1) = lc ....
     .....OR c(6, 1, 3) = lc THEN
    IF c(1, 3, 3) = bc OR c(4, 3, 1) = bc ....
     .....OR c(6, 1, 3) = bc THEN
     PrStr "ie. URU-1L-1UR-1U-1L  ", 5
       'u/r/b goes anticl. to u/l/b
     Rotpr 1,1: Rotpr 4,1: Rotpr 1,3:Rotpr 3,3
     Rotpr 1,1: Rotpr 4,3: Rotpr 1,3:Rotpr 3,1
    END IF
   END IF
  CASE 1001:    'u/r/f and u/l/f correct
    PrStr "ie. FU-1B-1UF-1U-1BU2 ", 5
    Rotpr 5,1: Rotpr 1,3: Rotpr 6,3: Rotpr 1,1
    Rotpr 5,3: Rotpr 1,3: Rotpr 6,1: Rotpr 1,2
  CASE 1010:    'u/r/f and u/l/b correct
    PrStr "ie. UFURU-1R-1F-1      ", 5
    Rotpr 1,1: Rotpr 5,1: Rotpr 1,1: Rotpr 4,1
    Rotpr 1,3: Rotpr 4,3: Rotpr 5,3
 END SELECT
 PrStr blank, 3: PrStr blank, 4
 PrStr blank, 5: PrStr blank, 6
END SUB
```

End of Listing 9

Random Access

Questions and Answers from the Monthly Meeting

John Swale

Answers

A: From Cindy Perry re Erica Place's problem: In a large document that has several sections, she would like to select certain pages to be printed — it is done as follows:

ie: 6-18s4 (which is page 6 to page 18 in section 4) or 6, 19, 21-24s3 (page 6, page 19, pages 21 to 24 in section 3)

A: From Chris Egan for Erica Place: 1. To print specific pages and sections in Word — this comes direct from the help file under Printing, Page ranges, and then Sections

To print a range of pages within a section: Type ***p*** page number ***s*** section number. For example, to print pages 5 through 7 in section 3, type p5s3–p7s3

To print a range of pages across sections: Type a range of page numbers and the sections that contain them with a hyphen between the starting and ending numbers in the range. For example, type p2s2–p3s5

A: From Mark Hughes: I may have an answer for Erica Place's question. For large multi-sectioned documents in Word 97 — to print a particular set of pages in different sections you need to use the following : Go to File—>Print and under Page Range-Pages you need to specify which sections/pages to print (this is easy enough). The tricky bit is to disregard what Microsoft say in its knowledge base article. They suggest you use s2p2–s2p6 to print pages 2 through 6 of section 2. The trick is to drop the leading "***s***". Above example becomes 2p2–2p6. Should work fine.

A: From Chris Egan for Doug Bennett Dialling from a hotel.

1. Check if there is a prefix needed — it may not be "0".

2. Try dialling the number on a normal phone — this will at least check the number is correct.

3. Check the line is not digital, although an analogue modem would presumably have blown up by now.

A: From Chris Egan further to the problem about the E key with Windows 98 and Word 97. We have several machines at work here with a very similar problem, although the key involved is lowercase ***j*** — capital ***j*** does **not** cause the problem. It only causes a problem when Explorer is open — it does not actually start Explorer.
In Explorer we cannot rename a file to include a lowercase ***j***. The only answer I have found is to close Explorer. I have played with the Accessibility options and they don't fix the problem.

A: From Andrew Smith re Doug Bennett's question: I suspect the modem is not being answered by the ISP. It will cost a call but in the hotel room situation, nothing beats using an analogue phone plugged into the line you are going to use for the modem and dialling the number you think will get you to your ISP. If the ISP answers you will get the modem handshake attempt. Listen to it. Is it clear? Does it sound like it does at home? If the answer is yes then set up the number you dialled to get that result in the dial box of your dial-up connection information including pauses etc.

Not sure the phone in the room is across the line you will be using for th modem? Not sure it is able to be unplugged Not sure it is an analogue phone? The answer is to carry your own. Buy a Dick Smith "*cheapie*". Don make it obvious to the hotel management you've got it.

If you run into a strange tone, recordir etc., ask the hotel management how yc can dial the number from your room. You might find they have blocked the number in the PABX because their carrier cannot supply electronic charging information back to the PAB for that particular type of number, so they cannot document it in order to charge you, yet the Hotel would be charged for the call. 13xxx and 19xxx a examples. If you are lucky, the operato will be able to override the barring afte you come to an agreement as to how much you will be charged per minute for the call.

If you get an answer and the tones are distorted, you may have to reduce your modem speed to obtain any reliability i the connection. To do that you must embed the correct command codes in the Extra settings box in the Advanced Connection Settings window of your modem properties. Each modem type has different codes and the only way is to read and understand the modem's documentation. Know this before you go. Sorry I can't give you an easy fix. In fact for this application a modern version of the old acoustic coupler modem holds its own. At last resort you can use it in a pay phone!

estions and Answers

Does anyone know of any mortgage
oan software — freeware if possible?

Try the banks.

I have a Logitech Trackman but no
ware. Will a standard mouse driver
Where can I get a driver for it?

Download the driver from the
gitech site. Some drivers are
versal for all products in the range.

I use a site where you can get a
ort on your computer setup, security
. Normally I can print out the report
now it refuses and gives a message
ata missing".

There are some sites where you can't
nt what is on the screen. Mark the
t and copy it to the clipboard and
nt it from there. Alternatively you
ild save it as a file and try printing it
er.

How can I send an e-mail from
thin WordPerfect 8 using Outlook
press. I have a picture on a floppy
k that I want to send as an
achment. I have followed the Help
instructions but to no avail.

: You should be able to use the
nu File/Send To/Mail Recipient.
is works with Outlook and may
rk with Outlook Express too.

: You would be better to attach the
ture to a standard e-mail. If you have
t in the WordPerfect document you
n copy it and paste into the e-mail
essage. You will need to do this if the
cipient doesn't have WordPerfect or a
eans of opening the document.

: I am using Windows 95 and
ordPerfect 8 and occasionally when I
ant to send the document as a fax to
indows fax I get an error message
ailed platform function". I think the
x still sends.

: It may be looking or a link to
icrosoft Exchange. Check the settings
r the fax.

: I bought a TV card to put in my
achine which runs Windows 95 and
as a Sound Blaster Live card. When I
ot it gets to the DOS screen and an
ror message that says that the 16-bit
nulation driver is conflicting with the
CI IRQ and will not load. There
doesn't seem to be any problem.

A: It is not loading the legacy sound driver that you need for DOS games. It always wants IRQ 5. If a PCI card is using IRQ 5 then the driver will not load. However it will work fine with Windows. If you don't need it in DOS, check in the config.sys and autoexec.bat files for the line where it loads and disable the command.

Unanswered Questions

Q: I have a Kensington orbit trackball and the Mouseworks driver has some nice features over a standard driver. After some time in standby the system loses track of the device in the PS/2 port. You have to shut down the systems and re-boot. I am using Windows 95 B.

Q: From David Rathgen: I am running a 486 using Windows 3.11 and Word 6; with Microsoft Internet Mail 3.1.

The Internet Mail date system cannot cope with Y2K and produces either a "no, or invalid date" message or some wildly optimistic date such as 1934! I have tried the Microsoft site for patches etc. to fix the problem, but they seem to think I should update to the latest Windows version and download their latest Internet system. There must be some alternative to fix this without having to spend lots of money. Please can you suggest a solution? ❑

Over to You

Please contact me if you have any comments on the answers given; can provide a reply for the unanswered questions; or if you cannot attend the monthly meeting and would like a question asked and included in this column.

To contact me: write to me care of the office; leave a message on the BBS or telephone me on (03) 9857 5567 AH or e-mail me at *jswale@melbpc.org.au*

Note: Please contact commercial distributors before asking a question here. In all cases mention version numbers.

For the Bookshelf

Major Keary

Linux

Just published in the Sybex *I-didn't-know-you-could-do-that* series is a title on Linux. This is not an introduction for new users, but sets out in concise form things you can do (and can't do) under a Linux operating system. For example, USB may be fine for Win98, but Linux presently doesn't want to know about it. There are not many Linux texts that give that problem a mention.

The book starts out by explaining how to put your knowledge of DOS to good use in understanding the Linux command line and how to use *vi* (just enough to handle the basic commands). Following chapters deal with file management (disk optimisation, recovery of lost files, absolute deletion of files, access DOS and Windows files, and hacking a hard disk); system automation; customising the desktop; running 'office' suites on Linux; running Windows applications on Linux; games; sound and video; Linux as a Web server; clone a WinNT server on Linux; Linux as a business server; and making the system disaster proof.

A companion CD contains the *ApplixWare Office Suite*, video and MP3 players, games, vrus scanners, finance tools, security facilities, Windows and NetWare integration tools, and *Apache* Web server add-on modules. A useful group of DOS programs enables user access to Linux partitions from the DOS command line (they can be run from a DOS box in Windows).

Linux users will find all kinds of useful things. For example, where to find a copy of NetWare for Linux with documentation, how to set up a fax server using software on the CD, and tracking your Web site traffic (software is on the CD). A useful supplement to standard Linux texts.

Nicholas Wells: *Linux—I Didn't Know You Could Do That*
ISBN 0-7821-2612-X
Published by SYBEX, 283 pp. + CD,
RRP $34.95 ❑

Dial Help Rules

The volunteer members listed on the reverse side of your mailer (*who are not necessarily experts*) provide phone assistance to other members FREE of charge. Dial Help is not free advertising for individuals who charge for their services; please advise the President directly of any such abuse.

Please, before ringing a Dial Help volunteer:

- Ring the vendor's support line and/or your corporate help desk.
- Read the manuals and have them handy.
- Turn on your computer and have your software running if possible.
- Be able to reproduce your problem.
- Have your phone beside the computer.

Keep all calls short, particularly business hours calls. If the volunteer is not available do not expect someone else to solve your problem, ring again later.

For topics not covered on you mailer or if you are unsure whom to call, ring The Dial Help First Aid Line: **9696 9200** (10.00 am–3.00 pm). A volunteer will assist you and suggest further contacts.

If you wish to help, or if you know of errors in the list, please advise the Production Manager ph: 97001566, e-mail *prod-mgr@melbpc.org.au*, or advise the Melb PC Office by phone, fax or e-mail — details on page 2.

Please do not leave messages on the BBS. Use phone, fax or e-mail instead.

Please keep calls within the hours indicated, and avoid ringing Dial Help volunteers on weekends. Above all, courtesy counts. For instance, please don't expect a volunteer to call you back on a mobile phone.

Day means

9.00 am – 5.00 pm

Evening means

6.30 pm – 9.00 pm

PC Update Themes and Deadlines for 2000

June
Connectivity
Deadline 5 May
July
SOHO/SME
Deadline 2 June
August
Family and Educational Computing
Deadline 30 June
September
Graphics
Deadline 4 August
October
Windows 2000
Deadline 1 September
November
Business Applications
Deadline 29 September
Dec-Jan
Christmas Special
Deadline 27 October

Please plan your writing activity.

Members' Free Ads

Small advertisements from members, for Swap, Wanted, For Sale, Free, etc., are run free of charge. Advertisements can be submitted either by: delivery to the Group's Office as an ASCII file on a non-returnable MS-DOS diskette (any size), or e-mail to prod-mgr@melbpc.org.au

Be sure to include your name, phone number and other contact details.

Ads will be included in the first available issue.

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Peter Selig
Phone (03) 9527-8805 Mobile 0419-335-221
e-mail: pfselig@melbpc.org.au

Acknowledgments

Melbourne PC User Group gratefully acknowledges the support provided by the following organisations:

American Power Conversion for the supply of six uninterruptible power supplies for the Group's Communications Centre.

Michaels Camera & Video for a Kodak DC20 Digital Camera.

Microsoft Australia for many years of contributions and support.

SONY Australia for the supply of equipment used in the production of *PC Update*.

Symantec Australia for many years of contributions and support.

Melbourne PC User Group Inc.
MONTHLY MEETING DETAILS

All members and guests welcome

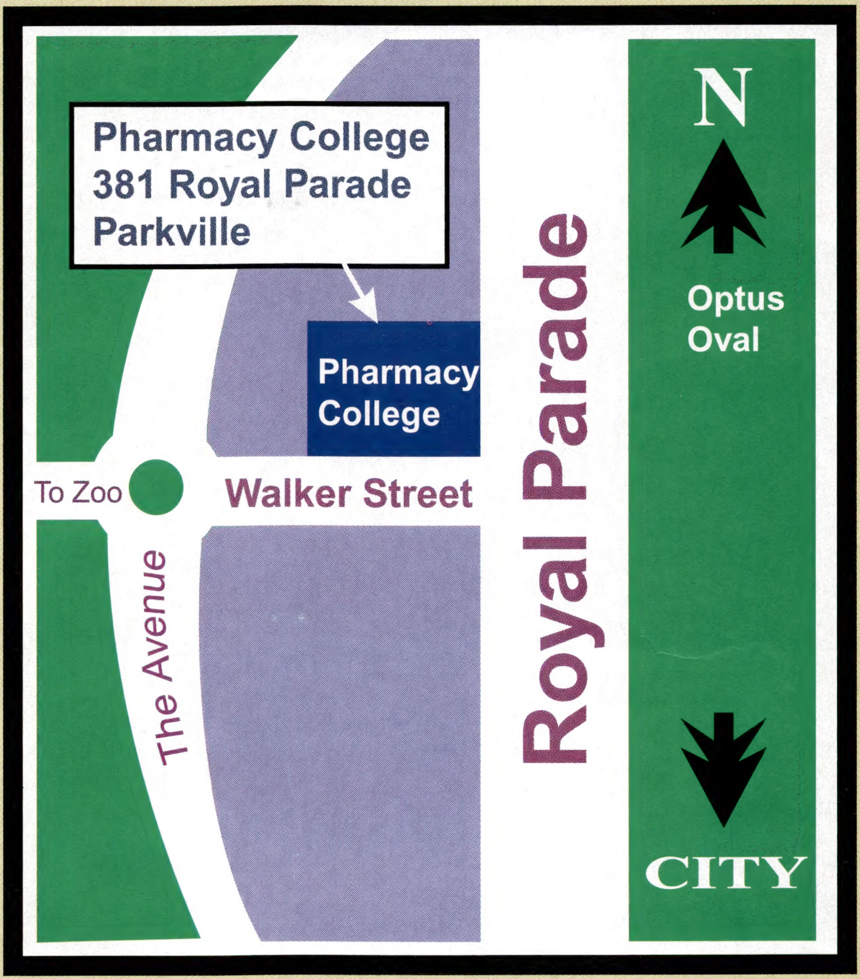
Pharmacy College
381 Royal Parade
Parkville
6:00 pm

First Wednesday each month

Do you have a product that would interest our members?

At least 250 members and guests and sometimes many more dependent upon the topic of the night, attend our monthly meetings. These meetings provide an excellent forum for the introduction and release of new products to those who are both users and decision-makers.

Meetings are arranged around planned themes. Members or presenters who are able to assist or contribute are invited to contact the convener, **Brian Horman**, via the office, on 9699 6222 or by e-mail *bhor@melbpc.org.au*



Next Meeting: Wednesday 3 May 2000

1. **Random Access. Members' Questions & Answers**
2. **Presentation by Asymetrix**
3. **Presentations by two members on Internet Security.**

As always... your questions to the presenters. Bring your guests. Light refreshments available. Membership staff on hand. Shareware sales: orders filled on the night, while you wait. Raffles, giveaways and more.

Advertisers Index

Accurate Figures & Co. 47
Bayside PC Services 41
Intronics 21
Northern Melbourne Institute of TAFE 8
Notebooks Galore 10
Om Trek 21
Pagination Design Services 64
Paradigm Software 47
Peter Selig 62
Pollock Computer and Technical Services 44
Technology Supermarkets Pty Ltd 25
TECS 27
The Scanner Place 41
Worsley Press 44

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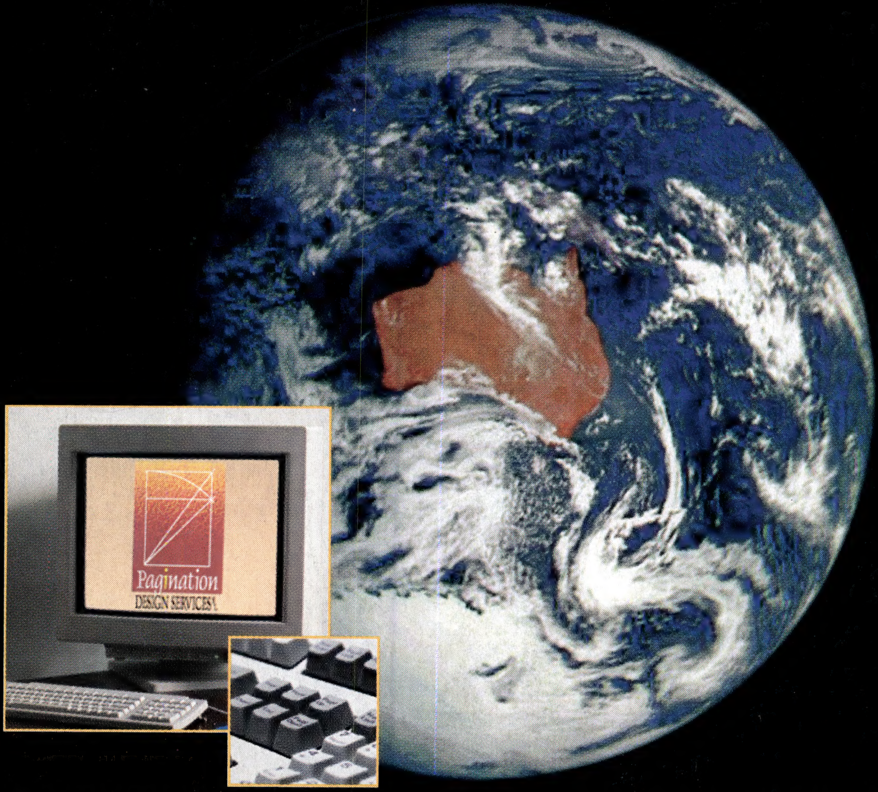

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